Bin Lu

List of Publications by Year
in descending order

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103 papers	8,540 citations	43973 48 h-index	43802 91 g-index
103 all docs	103 docs citations	103 times ranked	6510 citing authors

#	Article	IF	Citations
1	Achieving a novel solvent-free regeneration of LiBH4 combining hydrogen storage and production in a closed material cycle. Journal of Magnesium and Alloys, 2023, 11, 1697-1708.	5.5	6
2	General construction of lithiophilic 3D skeleton for dendrite-free lithium metal anode via a versatile MOF-derived route. Science China Materials, 2022, 65, 337-348.	3.5	38
3	Tinâ€Based Anode Materials for Stable Sodium Storage: Progress and Perspective. Advanced Materials, 2022, 34, e2106895.	11.1	68
4	Synthesis of NaBH₄ as a hydrogen carrier from hydrated borax using a Mgâ€“Al alloy. Inorganic Chemistry Frontiers, 2022, 9, 370-378.	3.0	5
5	Efficient hydrogen release from LiBH4 alcoholysis in methanol/ethylene glycol based solutions over a wide temperature range. Journal of Alloys and Compounds, 2022, 905, 164030.	2.8	7
6	Boosting Reversibility and Stability of Li Storage in SnO₂â€“Mo Multilayers: Introduction of Interfacial Oxygen Redistribution. Advanced Materials, 2022, 34, e2106366.	11.1	23
7	A Self-Supporting Covalent Organic Framework Separator with Desolvation Effect for High Energy Density Lithium Metal Batteries. ACS Energy Letters, 2022, 7, 885-896.	8.8	76
8	In Situ Construction a Stable Protective Layer in Polymer Electrolyte for Ultralong Lifespan Solidâ€State Lithium Metal Batteries. Advanced Science, 2022, 9, e2104277.	5.6	78
9	Advances in the Development of Singleâ€Atom Catalysts for Highâ€Energyâ€Density Lithiumâ€“Sulfur Batteries. Advanced Materials, 2022, 34, e2200102.	11.1	202
10	N-Doped Carbon Coated SnS/rGO Composite with Superior Cyclic Stability as Anode for Lithium-Ion Batteries. Industrial & Engineering Chemistry Research, 2022, 61, 4339-4347.	1.8	4
11	Recent progress on hydrogen generation from the hydrolysis of light metals and hydrides. Journal of Alloys and Compounds, 2022, 910, 164831.	2.8	52
12	Construction of SnS-Mo-graphene nanosheets composite for highly reversible and stable lithium/sodium storage. Journal of Materials Science and Technology, 2022, 121, 190-198.	5.6	11
13	Insight into Reversible Conversion Reactions in SnO₂â€Based Anodes for Lithium Storage: A Review. Small, 2022, 18, e2201110.	5.2	40
14	Dualâ€Carbonâ€Confined SnS Nanostructure with High Capacity and Long Cycle Life for Lithiumâ€ion Batteries. Energy and Environmental Materials, 2021, 4, 562-568.	7.3	24
15	Boosted lithium storage cycling stability of TiP2 by in-situ partial self-decomposition and nano-spatial confinement. Journal of Power Sources, 2021, 485, 229337.	4.0	9
16	A nanorod-like Ni-rich layered cathode with enhanced Li⁺ diffusion pathways for high-performance lithium-ion batteries. Journal of Materials Chemistry A, 2021, 9, 2830-2839.	5.2	58
17	Microsized SnS/Fewâ€Layer Graphene Composite with Interconnected Nanosized Building Blocks for Superior Volumetric Lithium and Sodium Storage. Energy and Environmental Materials, 2021, 4, 229-238.	7.3	21
18	Applications of Plasma-Assisted Systems for Advanced Electrode Material Synthesis and Modification. ACS Applied Materials & Interfaces, 2021, 13, 13909-13919.	4.0	24

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19	Enhanced hydrogen generation from hydrolysis of MgLi doped with expanded graphite. Journal of Magnesium and Alloys, 2021, 9, 2185-2193.	5.5	12
20	Subzero temperature promotes stable lithium storage in SnO2. Energy Storage Materials, 2021, 36, 242-250.	9.5	36
21	Li2CO3 induced stable SEI formation: An efficient strategy to boost reversibility and cyclability of Li storage in SnO2 anodes. Science China Materials, 2021, 64, 2683-2696.	3.5	17
22	Breaking the Passivation: Sodium Borohydride Synthesis by Reacting Hydrated Borax with Aluminum. Chemistry - A European Journal, 2021, 27, 9087-9093.	1.7	6
23	Hydrogen Production via Hydrolysis and Alcoholysis of Light Metal-Based Materials: A Review. Nano-Micro Letters, 2021, 13, 134.	14.4	62
24	In-situ introducing TiP2 nanocrystals in black phosphorus anode to promote high rate-capacity synergy. Journal of Power Sources, 2021, 499, 229979.	4.0	13
25	Synthesis of amorphous SeP2/C composite by plasma assisted ball milling for high-performance anode materials of lithium and sodium-ion batteries. Progress in Natural Science: Materials International, 2021, 31, 567-574.	1.8	13
26	LiFâ€Induced Stable Solid Electrolyte Interphase for a Wide Temperature SnO₂â€Based Anode Extensible to â^'50ÂÂ°C. Advanced Energy Materials, 2021, 11, 2101855.	10.2	20
27	Constructing Liâ€Rich Artificial SEI Layer in Alloyâ€"Polymer Composite Electrolyte to Achieve High Ionic Conductivity for Allâ€Solidâ€State Lithium Metal Batteries. Advanced Materials, 2021, 33, e2004711.	11.1	82
28	Reversible formation of metastable Sn-rich solid solution in SnO2-based anode for high-performance lithium storage. Applied Materials Today, 2021, 25, 101242.	2.3	3
29	A phosphorus and carbon composite containing nanocrystalline Sb as a stable and high-capacity anode for sodium ion batteries. Journal of Materials Chemistry A, 2020, 8, 443-452.	5.2	29
30	Good cycling stability and high initial efficiency demonstrated in full cells with limited lithium source for an advanced SnO2â€"Coâ€"C composite anode. Electrochimica Acta, 2020, 334, 135640.	2.6	11
31	Chemical bonding black phosphorus with TiO2 and carbon toward high-performance lithium storage. Journal of Power Sources, 2020, 449, 227549.	4.0	32
32	Reaction Route Optimized LiBH₄ for High Reversible Capacity Hydrogen Storage by Tunable Surface-Modified AlN. ACS Applied Energy Materials, 2020, 3, 11964-11973.	2.5	16
33	Effect of Y substitution on the high rate dischargeability of AB4.6 alloys as an electrode material for nickel metal hydride batteries. Journal of Alloys and Compounds, 2020, 849, 156641.	2.8	8
34	A flexible composite solid electrolyte with a highly stable interphase for dendrite-free and durable all-solid-state lithium metal batteries. Journal of Materials Chemistry A, 2020, 8, 18043-18054.	5.2	77
35	Efficient Synthesis of Sodium Borohydride: Balancing Reducing Agents with Intrinsic Hydrogen Source in Hydrated Borax. ACS Sustainable Chemistry and Engineering, 2020, 8, 13449-13458.	3.2	17
36	A high-performance hydrogen generation system: Hydrolysis of LiBH4-based materials catalyzed by transition metal chlorides. Renewable Energy, 2020, 156, 655-664.	4.3	31

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37	Promoting Al hydrolysis via MgH2 and NaOH addition. Journal of Alloys and Compounds, 2020, 831, 154793.	2.8	18
38	Hydrogen storage in light-metal based systems: A review. Journal of Alloys and Compounds, 2020, 829, 154597.	2.8	133
39	Magnesium-based hydrogen storage compounds: A review. Journal of Alloys and Compounds, 2020, 832, 154865.	2.8	206
40	Kinetically Controllable Hydrogen Generation at Low Temperatures by the Alcoholysis of CaMg₂â€Based Materials in Tailored Solutions. ChemSusChem, 2020, 13, 2709-2718.	3.6	12
41	Closing the Loop for Hydrogen Storage: Facile Regeneration of NaBH₄ from its Hydrolytic Product. Angewandte Chemie - International Edition, 2020, 59, 8623-8629.	7.2	205
42	Low temperature dehydrogenation properties of ammonia borane within carbon nanotube arrays: a synergistic effect of nanoconfinement and alane. RSC Advances, 2020, 10, 19027-19033.	1.7	7
43	Converting H⁺ from coordinated water into H^{â^'} enables super facile synthesis of LiBH₄. Green Chemistry, 2019, 21, 4380-4387.	4.6	149
44	Plasma-assisted coating of nanosized SnO2 on LiNi0.5Co0.2Mn0.3O2 cathodes for enhanced cyclic stability of lithium-ion batteries. Journal of Alloys and Compounds, 2019, 803, 71-79.	2.8	33
45	Nano-spatially confined and interface-controlled lithiationâ€"delithiation in an in situ formed (SnSâ€"SnS₂â€"S)/FLG composite: a route to an ultrafast and cycle-stable anode for lithium-ion batteries. Journal of Materials Chemistry A, 2019, 7, 15320-15332.	5.2	32
46	Plasma milling modified Sb2S3-graphite nanocomposite as a highly reversible alloying-conversion anode material for lithium storage. Electrochimica Acta, 2019, 310, 26-37.	2.6	23
47	Controllable Hydrolysis Performance of MgLi Alloys and Their Hydrides. ChemPhysChem, 2019, 20, 1316-1324.	1.0	27
48	Realizing facile regeneration of spent NaBH₄ with Mgâ€"Al alloy. Journal of Materials Chemistry A, 2019, 7, 10723-10728.	5.2	39
49	Magnesium borohydride hydrolysis with kinetics controlled by ammoniate formation. International Journal of Hydrogen Energy, 2019, 44, 7392-7401.	3.8	25
50	Promoting hydrogen generation from the hydrolysis of Mg-Graphite composites by plasma-assisted milling. Energy, 2019, 167, 1205-1211.	4.5	106
51	Highly reversible conversion reaction in Sn2Fe@SiOx nanocomposite: A high initial Coulombic efficiency and long lifetime anode for lithium storage. Energy Storage Materials, 2018, 13, 257-266.	9.5	32
52	Hydrogen generation by hydrolysis of Mg-Mg2Si composite and enhanced kinetics performance from introducing of MgCl2 and Si. International Journal of Hydrogen Energy, 2018, 43, 2903-2912.	3.8	92
53	Unveiling critical size of coarsened Sn nanograins for achieving high round-trip efficiency of reversible conversion reaction in lithiated SnO2 nanocrystals. Nano Energy, 2018, 45, 255-265.	8.2	80
54	Sodium borohydride regeneration via direct hydrogen transformation of sodium metaborate tetrahydrate. Journal of Power Sources, 2018, 390, 71-77.	4.0	26

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55	A scalable ternary SnO₂â€“Coâ€“C composite as a high initial coulombic efficiency, large capacity and long lifetime anode for lithium ion batteries. Journal of Materials Chemistry A, 2018, 6, 7206-7220.	5.2	74
56	FeP@C Nanotube Arrays Grown on Carbon Fabric as a Low Potential and Freestanding Anode for Highâ€Performance Liâ€Ion Batteries. Small, 2018, 14, e1800793.	5.2	94
57	An one-step approach towards hydrogen production and storage through regeneration of NaBH4. Energy Storage Materials, 2017, 7, 222-228.	9.5	146
58	Stabilizing the Nanostructure of SnO₂ Anodes by Transition Metals: A Route to Achieve High Initial Coulombic Efficiency and Stable Capacities for Lithium Storage. Advanced Materials, 2017, 29, 1605006.	11.1	306
59	New Nanoconfined Galvanic Replacement Synthesis of Hollow Sb@C Yolkâ€“Shell Spheres Constituting a Stable Anode for High-Rate Li/Na-Ion Batteries. Nano Letters, 2017, 17, 2034-2042.	4.5	386
60	NaBH 4 regeneration from NaBO 2 by high-energy ball milling and its plausible mechanism. International Journal of Hydrogen Energy, 2017, 42, 13127-13135.	3.8	44
61	Air-stable hydrogen generation materials and enhanced hydrolysis performance of MgH 2 -LiNH 2 composites. Journal of Power Sources, 2017, 359, 427-434.	4.0	103
62	Hydrogen generation via hydrolysis of magnesium with seawater using Mo, MoO₂, MoO₃ and MoS₂ as catalysts. Journal of Materials Chemistry A, 2017, 5, 8566-8575.	5.2	103
63	Facile synthesis of self-supported Mn₃O₄@C nanotube arrays constituting an ultrastable and high-rate anode for flexible Li-ion batteries. Journal of Materials Chemistry A, 2017, 5, 8555-8565.	5.2	41
64	Origin of Capacity Increasing in a Longâ€Life Ternary Snâ€“Fe₃O₄@Graphite Anode for Liâ€Ion Batteries. Advanced Materials Interfaces, 2017, 4, 1700113.	1.9	43
65	Reversible hydrogen storage in yttrium aluminum hydride. Journal of Materials Chemistry A, 2017, 5, 6042-6046.	5.2	29
66	A highly stable (SnO x -Sn)@few layered graphene composite anode of sodium-ion batteries synthesized by oxygen plasma assisted milling. Journal of Power Sources, 2017, 350, 1-8.	4.0	74
67	Recent advances and remaining challenges of nanostructured materials for hydrogen storage applications. Progress in Materials Science, 2017, 88, 1-48.	16.0	526
68	Efficient regeneration of sodium borohydride via ball milling dihydrate sodium metaborate with magnesium and magnesium silicide. Journal of Alloys and Compounds, 2017, 729, 1079-1085.	2.8	22
69	Synthesis and hydrolysis of NaZn(BH4)3 and its ammoniates. Journal of Materials Chemistry A, 2017, 5, 17012-17020.	5.2	32
70	Inhibiting grain coarsening and inducing oxygen vacancies: the roles of Mn in achieving a highly reversible conversion reaction and a long life SnO₂â€“Mnâ€“graphite ternary anode. Energy and Environmental Science, 2017, 10, 2017-2029.	15.6	152
71	Hydrogen generation properties and the hydrolysis mechanism of Zr(BH₄)₄Â·8NH₃. Journal of Materials Chemistry A, 2017, 5, 16630-16635.	5.2	14
72	Application of dielectric barrier discharge plasma-assisted milling in energy storage materials â€“ A review. Journal of Alloys and Compounds, 2017, 691, 422-435.	2.8	301

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73	Enhancing the Regeneration Process of Consumed NaBH₄ for Hydrogen Storage. Advanced Energy Materials, 2017, 7, 1700299.	10.2	304
74	Enhanced hydrogen generation by hydrolysis of Mg doped with flower-like MoS 2 for fuel cell applications. Journal of Power Sources, 2017, 365, 273-281.	4.0	77
75	Inhibiting Sn coarsening to enhance the reversibility of conversion reaction in lithiated SnO2 anodes by application of super-elastic NiTi films. Acta Materialia, 2016, 109, 248-258.	3.8	54
76	A spherical Snâ€"Fe₃O₄@graphite composite as a long-life and high-rate-capability anode for lithium ion batteries. Journal of Materials Chemistry A, 2016, 4, 10321-10328.	5.2	63
77	Mesoporous Mo₂C/N-doped carbon heteronanowires as high-rate and long-life anode materials for Li-ion batteries. Journal of Materials Chemistry A, 2016, 4, 10842-10849.	5.2	143
78	Uniform Hierarchical Fe₃O₄@Polypyrrole Nanocages for Superior Lithium Ion Battery Anodes. Advanced Energy Materials, 2016, 6, 1600256.	10.2	184
79	Dramatically enhanced reversibility of Li₂O in SnO₂-based electrodes: the effect of nanostructure on high initial reversible capacity. Energy and Environmental Science, 2016, 9, 595-603.	15.6	300
80	A novel method for the synthesis of solvent-free Mg(B₃H₈)₂. Dalton Transactions, 2016, 45, 3687-3690.	1.6	35
81	Sandwich-like SnS/Polypyrrole Ultrathin Nanosheets as High-Performance Anode Materials for Li-Ion Batteries. ACS Applied Materials & Interfaces, 2016, 8, 8502-8510.	4.0	133
82	A long-life nano-silicon anode for lithium ion batteries: supporting of graphene nanosheets exfoliated from expanded graphite by plasma-assisted milling. Electrochimica Acta, 2016, 187, 1-10.	2.6	89
83	Metalâ€Borohydrideâ€Modified Zr(BH₄)₄â‹…8â€‰NH₃: Lowâ€Temperature Dehydrogenation Yielding Highly Pure Hydrogen. Chemistry - A European Journal, 2015, 21, 14931-14936.	1.7	13
84	Deformable fibrous carbon supported ultrafine nano-SnO₂ as a high volumetric capacity and cyclic durable anode for Li storage. Journal of Materials Chemistry A, 2015, 3, 15097-15107.	5.2	46
85	Enhanced Hydrogen Generation Properties of MgH2-Based Hydrides by Breaking the Magnesium Hydroxide Passivation Layer. Energies, 2015, 8, 4237-4252.	1.6	90
86	Hydrogen generation by hydrolysis of MgH2 and enhanced kinetics performance of ammonium chloride introducing. International Journal of Hydrogen Energy, 2015, 40, 6145-6150.	3.8	174
87	Ammonia borane modified zirconium borohydride octaammoniate with enhanced dehydrogenation properties. Journal of Materials Chemistry A, 2015, 3, 5299-5304.	5.2	22
88	Cu6Sn5@SnO2â€"C nanocomposite with stable core/shell structure as a high reversible anode for Li-ion batteries. Nano Energy, 2015, 18, 232-244.	8.2	56
89	Synthesis, structure and dehydrogenation of zirconium borohydride octaammoniate. Chemical Communications, 2015, 51, 2794-2797.	2.2	34
90	Dual-tuning effects of In, Al, and Ti on the thermodynamics and kinetics of Mg85In5Al5Ti5 alloy synthesized by plasma milling. Journal of Alloys and Compounds, 2015, 623, 354-358.	2.8	134

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91	Mgâ€“TM (TM: Ti, Nb, V, Co, Mo or Ni) coreâ€“shell like nanostructures: synthesis, hydrogen storage performance and catalytic mechanism. Journal of Materials Chemistry A, 2014, 2, 9645-9655.	5.2	248
92	Embedding nano-silicon in graphene nanosheets by plasma assisted milling for high capacity anode materials in lithium ion batteries. Journal of Power Sources, 2014, 268, 610-618.	4.0	110
93	A mechanical-force-driven physical vapour deposition approach to fabricating complex hydride nanostructures. Nature Communications, 2014, 5, 3519.	5.8	136
94	Silicon/graphene based nanocomposite anode: large-scale production and stable high capacity for lithium ion batteries. Journal of Materials Chemistry A, 2014, 2, 9118-9125.	5.2	131
95	The fast filling of nano-SnO2 in CNTs by vacuum absorption: a new approach to realize cyclic durable anodes for lithium ion batteries. Nanoscale, 2013, 5, 11971.	2.8	86
96	A synergistic strategy established by the combination of two H-enriched Bâ€“N based hydrides towards superior dehydrogenation. Journal of Materials Chemistry A, 2013, 1, 10155.	5.2	26
97	Sn@SnOx/C nanocomposites prepared by oxygen plasma-assisted milling as cyclic durable anodes for lithium ion batteries. Journal of Power Sources, 2013, 242, 114-121.	4.0	94
98	Thermodynamic Tuning of Mg-Based Hydrogen Storage Alloys: A Review. Materials, 2013, 6, 4654-4674.	1.3	157
99	Microsized Sn supported by NiTi alloy as a high-performance film anode for Li-ion batteries. Journal of Materials Chemistry, 2012, 22, 9539.	6.7	23
100	Enhancing the performance of Snâ€“C nanocomposite as lithium ion anode by discharge plasma assisted milling. Journal of Materials Chemistry, 2012, 22, 8022.	6.7	44
101	Confined LiBH4: Enabling fast hydrogen release at â^¼100ÂÂ°C. International Journal of Hydrogen Energy, 2012, 37, 18920-18926.	3.8	44
102	Progress on Sn-based thin-film anode materials for lithium-ion batteries. Science Bulletin, 2012, 57, 4119-4130.	1.7	53
103	Recent progress in hydrogen storage. Materials Today, 2008, 11, 36-43.	8.3	471