

Bin Lu

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

101
papers

5,931
citations

41
h-index

76
g-index

103
ext. papers

7,250
ext. citations

11.5
avg, IF

6.23
L-index

#	Paper	IF	Citations
101	Efficient hydrogen release from LiBH ₄ alcoholysis in methanol/ethylene glycol based solutions over a wide temperature range. <i>Journal of Alloys and Compounds</i> , 2022 , 164030	5.7	0
100	A Self-Supporting Covalent Organic Framework Separator with Desolvation Effect for High Energy Density Lithium Metal Batteries. <i>ACS Energy Letters</i> , 2022 , 7, 885-896	20.1	13
99	In Situ Construction a Stable Protective Layer in Polymer Electrolyte for Ultralong Lifespan Solid-State Lithium Metal Batteries.. <i>Advanced Science</i> , 2022 , e2104277	13.6	11
98	Advances in the Development of Single-Atom Catalysts for High-Energy-Density Lithium-Sulfur Batteries.. <i>Advanced Materials</i> , 2022 , e2200102	24	13
97	N-Doped Carbon Coated SnS/rGO Composite with Superior Cyclic Stability as Anode for Lithium-Ion Batteries. <i>Industrial & Engineering Chemistry Research</i> , 2022 , 61, 4339-4347	3.9	0
96	Recent progress on hydrogen generation from the hydrolysis of light metals and hydrides. <i>Journal of Alloys and Compounds</i> , 2022 , 164831	5.7	5
95	Construction of SnS-Mo-graphene nanosheets composite for highly reversible and stable lithium/sodium storage. <i>Journal of Materials Science and Technology</i> , 2022 , 121, 190-198	9.1	1
94	Insight into Reversible Conversion Reactions in SnO -Based Anodes for Lithium Storage: A Review.. <i>Small</i> , 2022 , e2201110	11	1
93	Boosting Reversibility and Stability of Li Storage in SnO -Mo Multilayers: Introduction of Interfacial Oxygen Redistribution.. <i>Advanced Materials</i> , 2021 , e2106366	24	4
92	Tin-Based Anode Materials for Stable Sodium Storage: Progress and Perspective. <i>Advanced Materials</i> , 2021 , e2106895	24	9
91	Reversible formation of metastable Sn-rich solid solution in SnO ₂ -based anode for high-performance lithium storage. <i>Applied Materials Today</i> , 2021 , 25, 101242	6.6	2
90	Applications of Plasma-Assisted Systems for Advanced Electrode Material Synthesis and Modification. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 13909-13919	9.5	7
89	Enhanced hydrogen generation from hydrolysis of MgLi doped with expanded graphite. <i>Journal of Magnesium and Alloys</i> , 2021 , 9, 2185-2185	8.8	2
88	Subzero temperature promotes stable lithium storage in SnO ₂ . <i>Energy Storage Materials</i> , 2021 , 36, 242-250	19.4	17
87	Li ₂ CO ₃ induced stable SEI formation: An efficient strategy to boost reversibility and cyclability of Li storage in SnO ₂ anodes. <i>Science China Materials</i> , 2021 , 64, 2683-2696	7.1	5
86	Breaking the Passivation: Sodium Borohydride Synthesis by Reacting Hydrated Borax with Aluminum. <i>Chemistry - A European Journal</i> , 2021 , 27, 9087-9093	4.8	0
85	Hydrogen Production via Hydrolysis and Alcoholysis of Light Metal-Based Materials: A Review. <i>Nano-Micro Letters</i> , 2021 , 13, 134	19.5	11

84	In-situ introducing TiP2 nanocrystals in black phosphorus anode to promote high rate-capacity synergy. <i>Journal of Power Sources</i> , 2021 , 499, 229979	8.9	4
83	Boosted lithium storage cycling stability of TiP2 by in-situ partial self-decomposition and nano-spatial confinement. <i>Journal of Power Sources</i> , 2021 , 485, 229337	8.9	7
82	A nanorod-like Ni-rich layered cathode with enhanced Li ⁺ diffusion pathways for high-performance lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 2830-2839	13	26
81	Microsized SnS/Few-Layer Graphene Composite with Interconnected Nanosized Building Blocks for Superior Volumetric Lithium and Sodium Storage. <i>Energy and Environmental Materials</i> , 2021 , 4, 229-238	13	8
80	Synthesis of amorphous SeP2/C composite by plasma assisted ball milling for high-performance anode materials of lithium and sodium-ion batteries. <i>Progress in Natural Science: Materials International</i> , 2021 , 31, 567-574	3.6	1
79	LiF-Induced Stable Solid Electrolyte Interphase for a Wide Temperature SnO2-Based Anode Extensible to BO ₂ C. <i>Advanced Energy Materials</i> , 2021 , 11, 2101855	21.8	5
78	Constructing Li-Rich Artificial SEI Layer in Alloy-Polymer Composite Electrolyte to Achieve High Ionic Conductivity for All-Solid-State Lithium Metal Batteries. <i>Advanced Materials</i> , 2021 , 33, e2004711	24	32
77	A high-performance hydrogen generation system: Hydrolysis of LiBH4-based materials catalyzed by transition metal chlorides. <i>Renewable Energy</i> , 2020 , 156, 655-664	8.1	11
76	Promoting Al hydrolysis via MgH2 and NaOH addition. <i>Journal of Alloys and Compounds</i> , 2020 , 831, 154793	9.3	6
75	Hydrogen storage in light-metal based systems: A review. <i>Journal of Alloys and Compounds</i> , 2020 , 829, 154597	5.7	61
74	Magnesium-based hydrogen storage compounds: A review. <i>Journal of Alloys and Compounds</i> , 2020 , 832, 154865	5.7	84
73	Kinetically Controllable Hydrogen Generation at Low Temperatures by the Alcoholysis of CaMg-Based Materials in Tailored Solutions. <i>ChemSusChem</i> , 2020 , 13, 2709-2718	8.3	4
72	Closing the Loop for Hydrogen Storage: Facile Regeneration of NaBH from its Hydrolytic Product. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 8623-8629	16.4	116
71	Low temperature dehydrogenation properties of ammonia borane within carbon nanotube arrays: a synergistic effect of nanoconfinement and alane.. <i>RSC Advances</i> , 2020 , 10, 19027-19033	3.7	4
70	A phosphorus and carbon composite containing nanocrystalline Sb as a stable and high-capacity anode for sodium ion batteries. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 443-452	13	18
69	Good cycling stability and high initial efficiency demonstrated in full cells with limited lithium source for an advanced SnO2//O ₂ composite anode. <i>Electrochimica Acta</i> , 2020 , 334, 135640	6.7	6
68	Chemical bonding black phosphorus with TiO2 and carbon toward high-performance lithium storage. <i>Journal of Power Sources</i> , 2020 , 449, 227549	8.9	21
67	Dual-Carbon-Confined SnS Nanostructure with High Capacity and Long Cycle Life for Lithium-ion Batteries. <i>Energy and Environmental Materials</i> , 2020 ,	13	8

66	Reaction Route Optimized LiBH ₄ for High Reversible Capacity Hydrogen Storage by Tunable Surface-Modified AlN. <i>ACS Applied Energy Materials</i> , 2020 , 3, 11964-11973	6.1	7
65	Effect of Y substitution on the high rate dischargeability of AB ₄ .6 alloys as an electrode material for nickel metal hydride batteries. <i>Journal of Alloys and Compounds</i> , 2020 , 849, 156641	5.7	4
64	A flexible composite solid electrolyte with a highly stable interphase for dendrite-free and durable all-solid-state lithium metal batteries. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 18043-18054	13	38
63	Efficient Synthesis of Sodium Borohydride: Balancing Reducing Agents with Intrinsic Hydrogen Source in Hydrated Borax. <i>ACS Sustainable Chemistry and Engineering</i> , 2020 , 8, 13449-13458	8.3	6
62	Nano-spatially confined and interface-controlled lithiation/delithiation in an in situ formed (SnS ₂ /SnS ₂ S)/FLG composite: a route to an ultrafast and cycle-stable anode for lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 15320-15332	13	24
61	Plasma milling modified Sb ₂ S ₃ -graphite nanocomposite as a highly reversible alloying-conversion anode material for lithium storage. <i>Electrochimica Acta</i> , 2019 , 310, 26-37	6.7	13
60	Controllable Hydrolysis Performance of MgLi Alloys and Their Hydrides. <i>ChemPhysChem</i> , 2019 , 20, 1316-1324	3.24	17
59	Realizing facile regeneration of spent NaBH ₄ with Mg ₂ Al alloy. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 10723-10728	13	21
58	Magnesium borohydride hydrolysis with kinetics controlled by ammoniate formation. <i>International Journal of Hydrogen Energy</i> , 2019 , 44, 7392-7401	6.7	16
57	Converting H ⁺ from coordinated water into H ₂ enables super facile synthesis of LiBH ₄ . <i>Green Chemistry</i> , 2019 , 21, 4380-4387	10	96
56	Plasma-assisted coating of nanosized SnO ₂ on LiNi _{0.5} Co _{0.2} Mn _{0.3} O ₂ cathodes for enhanced cyclic stability of lithium-ion batteries. <i>Journal of Alloys and Compounds</i> , 2019 , 803, 71-79	5.7	18
55	Promoting hydrogen generation from the hydrolysis of Mg-Graphite composites by plasma-assisted milling. <i>Energy</i> , 2019 , 167, 1205-1211	7.9	68
54	Highly reversible conversion reaction in Sn ₂ Fe@SiO _x nanocomposite: A high initial Coulombic efficiency and long lifetime anode for lithium storage. <i>Energy Storage Materials</i> , 2018 , 13, 257-266	19.4	25
53	Hydrogen generation by hydrolysis of Mg-Mg ₂ Si composite and enhanced kinetics performance from introducing of MgCl ₂ and Si. <i>International Journal of Hydrogen Energy</i> , 2018 , 43, 2903-2912	6.7	74
52	Unveiling critical size of coarsened Sn nanograins for achieving high round-trip efficiency of reversible conversion reaction in lithiated SnO ₂ nanocrystals. <i>Nano Energy</i> , 2018 , 45, 255-265	17.1	65
51	Sodium borohydride regeneration via direct hydrogen transformation of sodium metaborate tetrahydrate. <i>Journal of Power Sources</i> , 2018 , 390, 71-77	8.9	18
50	A scalable ternary SnO ₂ /Co ₃ O ₄ composite as a high initial coulombic efficiency, large capacity and long lifetime anode for lithium ion batteries. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 7206-7220	13	56
49	FeP@C Nanotube Arrays Grown on Carbon Fabric as a Low Potential and Freestanding Anode for High-Performance Li-Ion Batteries. <i>Small</i> , 2018 , 14, e1800793	11	73

48	An one-step approach towards hydrogen production and storage through regeneration of NaBH ₄ . <i>Energy Storage Materials</i> , 2017 , 7, 222-228	19.4	116
47	Stabilizing the Nanostructure of SnO Anodes by Transition Metals: A Route to Achieve High Initial Coulombic Efficiency and Stable Capacities for Lithium Storage. <i>Advanced Materials</i> , 2017 , 29, 1605006	24	246
46	New Nanoconfined Galvanic Replacement Synthesis of Hollow Sb@C Yolk-Shell Spheres Constituting a Stable Anode for High-Rate Li/Na-Ion Batteries. <i>Nano Letters</i> , 2017 , 17, 2034-2042	11.5	306
45	NaBH ₄ regeneration from NaBO ₂ by high-energy ball milling and its plausible mechanism. <i>International Journal of Hydrogen Energy</i> , 2017 , 42, 13127-13135	6.7	28
44	Air-stable hydrogen generation materials and enhanced hydrolysis performance of MgH ₂ -LiNH ₂ composites. <i>Journal of Power Sources</i> , 2017 , 359, 427-434	8.9	69
43	Hydrogen generation via hydrolysis of magnesium with seawater using Mo, MoO ₂ , MoO ₃ and MoS ₂ as catalysts. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 8566-8575	13	76
42	Facile synthesis of self-supported Mn ₃ O ₄ @C nanotube arrays constituting an ultrastable and high-rate anode for flexible Li-ion batteries. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 8555-8565	13	35
41	Origin of Capacity Increasing in a Long-Life Ternary SnFe ₃ O ₄ @Graphite Anode for Li-Ion Batteries. <i>Advanced Materials Interfaces</i> , 2017 , 4, 1700113	4.6	39
40	Reversible hydrogen storage in yttrium aluminum hydride. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 6042-6046	27	
39	A highly stable (SnO _x -Sn) _n @few layered graphene composite anode of sodium-ion batteries synthesized by oxygen plasma assisted milling. <i>Journal of Power Sources</i> , 2017 , 350, 1-8	8.9	65
38	Recent advances and remaining challenges of nanostructured materials for hydrogen storage applications. <i>Progress in Materials Science</i> , 2017 , 88, 1-48	42.2	366
37	Efficient regeneration of sodium borohydride via ball milling dihydrate sodium metaborate with magnesium and magnesium silicide. <i>Journal of Alloys and Compounds</i> , 2017 , 729, 1079-1085	5.7	15
36	Synthesis and hydrolysis of NaZn(BH ₄) ₃ and its ammoniates. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 17012-17020	13	29
35	Inhibiting grain coarsening and inducing oxygen vacancies: the roles of Mn in achieving a highly reversible conversion reaction and a long life SnO ₂ /Mn/graphite ternary anode. <i>Energy and Environmental Science</i> , 2017 , 10, 2017-2029	35.4	120
34	Hydrogen generation properties and the hydrolysis mechanism of Zr(BH ₄) ₄ /BNH ₃ . <i>Journal of Materials Chemistry A</i> , 2017 , 5, 16630-16635	13	13
33	Application of dielectric barrier discharge plasma-assisted milling in energy storage materials [A review]. <i>Journal of Alloys and Compounds</i> , 2017 , 691, 422-435	5.7	248
32	Enhanced hydrogen generation by hydrolysis of Mg doped with flower-like MoS ₂ for fuel cell applications. <i>Journal of Power Sources</i> , 2017 , 365, 273-281	8.9	53
31	Enhancing the Regeneration Process of Consumed NaBH ₄ for Hydrogen Storage. <i>Advanced Energy Materials</i> , 2017 , 7, 1700299	21.8	223

30	Mesoporous Mo ₂ C/N-doped carbon heteronanowires as high-rate and long-life anode materials for Li-ion batteries. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 10842-10849	13	119
29	Uniform Hierarchical Fe ₃ O ₄ @Polypyrrole Nanocages for Superior Lithium Ion Battery Anodes. <i>Advanced Energy Materials</i> , 2016 , 6, 1600256	21.8	152
28	Dramatically enhanced reversibility of Li ₂ O in SnO ₂ -based electrodes: the effect of nanostructure on high initial reversible capacity. <i>Energy and Environmental Science</i> , 2016 , 9, 595-603	35.4	257
27	A novel method for the synthesis of solvent-free Mg(B ₃ H ₈) ₂ . <i>Dalton Transactions</i> , 2016 , 45, 3687-90	4.3	33
26	Sandwich-like SnS/Polypyrrole Ultrathin Nanosheets as High-Performance Anode Materials for Li-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 8502-10	9.5	115
25	A long-life nano-silicon anode for lithium ion batteries: supporting of graphene nanosheets exfoliated from expanded graphite by plasma-assisted milling. <i>Electrochimica Acta</i> , 2016 , 187, 1-10	6.7	68
24	Inhibiting Sn coarsening to enhance the reversibility of conversion reaction in lithiated SnO ₂ anodes by application of super-elastic NiTi films. <i>Acta Materialia</i> , 2016 , 109, 248-258	8.4	45
23	A spherical SnFe ₃ O ₄ @graphite composite as a long-life and high-rate-capability anode for lithium ion batteries. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 10321-10328	13	52
22	Enhanced Hydrogen Generation Properties of MgH ₂ -Based Hydrides by Breaking the Magnesium Hydroxide Passivation Layer. <i>Energies</i> , 2015 , 8, 4237-4252	3.1	68
21	Hydrogen generation by hydrolysis of MgH ₂ and enhanced kinetics performance of ammonium chloride introducing. <i>International Journal of Hydrogen Energy</i> , 2015 , 40, 6145-6150	6.7	142
20	Ammonia borane modified zirconium borohydride octaammoniate with enhanced dehydrogenation properties. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 5299-5304	13	20
19	Cu ₆ Sn ₅ @SnO ₂ nanocomposite with stable core/shell structure as a high reversible anode for Li-ion batteries. <i>Nano Energy</i> , 2015 , 18, 232-244	17.1	47
18	Synthesis, structure and dehydrogenation of zirconium borohydride octaammoniate. <i>Chemical Communications</i> , 2015 , 51, 2794-7	5.8	28
17	Dual-tuning effects of In, Al, and Ti on the thermodynamics and kinetics of Mg ₈₅ In ₅ Al ₅ Ti ₅ alloy synthesized by plasma milling. <i>Journal of Alloys and Compounds</i> , 2015 , 623, 354-358	5.7	120
16	Metal-Borohydride-Modified Zr(BH ₄) ₄ ·8NH ₃ : Low-Temperature Dehydrogenation Yielding Highly Pure Hydrogen. <i>Chemistry - A European Journal</i> , 2015 , 21, 14931-6	4.8	12
15	Deformable fibrous carbon supported ultrafine nano-SnO ₂ as a high volumetric capacity and cyclic durable anode for Li storage. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 15097-15107	13	44
14	Mg@M (TM: Ti, Nb, V, Co, Mo or Ni) core-shell like nanostructures: synthesis, hydrogen storage performance and catalytic mechanism. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 9645-9655	13	167
13	Embedding nano-silicon in graphene nanosheets by plasma assisted milling for high capacity anode materials in lithium ion batteries. <i>Journal of Power Sources</i> , 2014 , 268, 610-618	8.9	99

12	A mechanical-force-driven physical vapour deposition approach to fabricating complex hydride nanostructures. <i>Nature Communications</i> , 2014 , 5, 3519	17.4	115
11	Silicon/graphene based nanocomposite anode: large-scale production and stable high capacity for lithium ion batteries. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 9118-9125	13	113
10	The fast filling of nano-SnO ₂ in CNTs by vacuum absorption: a new approach to realize cyclic durable anodes for lithium ion batteries. <i>Nanoscale</i> , 2013 , 5, 11971-9	7.7	79
9	A synergistic strategy established by the combination of two H-enriched B _N based hydrides towards superior dehydrogenation. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 10155	13	24
8	Sn@SnO _x /C nanocomposites prepared by oxygen plasma-assisted milling as cyclic durable anodes for lithium ion batteries. <i>Journal of Power Sources</i> , 2013 , 242, 114-121	8.9	84
7	Thermodynamic Tuning of Mg-Based Hydrogen Storage Alloys: A Review. <i>Materials</i> , 2013 , 6, 4654-4674	3.5	123
6	Microsized Sn supported by NiTi alloy as a high-performance film anode for Li-ion batteries. <i>Journal of Materials Chemistry</i> , 2012 , 22, 9539		21
5	Enhancing the performance of Sn/C nanocomposite as lithium ion anode by discharge plasma assisted milling. <i>Journal of Materials Chemistry</i> , 2012 , 22, 8022		40
4	Confined LiBH ₄ : Enabling fast hydrogen release at ~100°C. <i>International Journal of Hydrogen Energy</i> , 2012 , 37, 18920-18926	6.7	38
3	Progress on Sn-based thin-film anode materials for lithium-ion batteries. <i>Science Bulletin</i> , 2012 , 57, 4119-4130		43
2	Recent progress in hydrogen storage. <i>Materials Today</i> , 2008 , 11, 36-43	21.8	422
1	General construction of lithiophilic 3D skeleton for dendrite-free lithium metal anode via a versatile MOF-derived route. <i>Science China Materials</i> , 1	7.1	5