Tao Liu

List of Publications by Year
in descending order

35 papers	2,801 citations	304602 22 h-index	345118 36 g-index
36 all docs	36 docs citations	36 times ranked	3999 citing authors

#	Article	IF	Citations
1	Cycling Li-O ₂ batteries via LiOH formation and decomposition. Science, 2015, 350, 530-533.	6.0	584
2	Current Challenges and Routes Forward for Nonaqueous Lithiumâ€“Air Batteries. Chemical Reviews, 2020, 120, 6558-6625.	23.0	356
3	Hydrophilic microporous membranes for selective ion separation and flow-battery energy storage. Nature Materials, 2020, 19, 195-202.	13.3	237
4	Understanding Fluoroethylene Carbonate and Vinylene Carbonate Based Electrolytes for Si Anodes in Lithium Ion Batteries with NMR Spectroscopy. Journal of the American Chemical Society, 2018, 140, 9854-9867.	6.6	219
5	Identifying the Structural Basis for the Increased Stability of the Solid Electrolyte Interphase Formed on Silicon with the Additive Fluoroethylene Carbonate. Journal of the American Chemical Society, 2017, 139, 14992-15004.	6.6	176
6	A textile-based SnO2 ultra-flexible electrode for lithium-ion batteries. Energy Storage Materials, 2019, 16, 597-606.	9.5	150
7	In situ NMR metrology reveals reaction mechanisms in redox flow batteries. Nature, 2020, 579, 224-228.	13.7	132
8	The Effect of Water on Quinone Redox Mediators in Nonaqueous Li-O₂ Batteries. Journal of the American Chemical Society, 2018, 140, 1428-1437.	6.6	88
9	Understanding LiOH Chemistry in a Rutheniumâ€Catalyzed Liâ€“O₂ Battery. Angewandte Chemie - International Edition, 2017, 56, 16057-16062.	7.2	78
10	Surface-Sensitive NMR Detection of the Solid Electrolyte Interphase Layer on Reduced Graphene Oxide. Journal of Physical Chemistry Letters, 2017, 8, 1078-1085.	2.1	69
11	Large scale computational screening and experimental discovery of novel materials for high temperature CO₂ capture. Energy and Environmental Science, 2016, 9, 1346-1360.	15.6	61
12	Mechanistic Insights into the Challenges of Cycling a Nonaqueous Naâ€“O₂ Battery. Journal of Physical Chemistry Letters, 2016, 7, 4841-4846.	2.1	58
13	Understanding LiOH Formation in a Li-O₂ Battery with LiI and H₂O Additives. ACS Catalysis, 2019, 9, 66-77.	5.5	57
14	Effects of Antisite Defects on Li Diffusion in LiFePO₄ Revealed by Li Isotope Exchange. Journal of Physical Chemistry C, 2017, 121, 12025-12036.	1.5	55
15	MoS2/C/C nanofiber with double-layer carbon coating for high cycling stability and rate capability in lithium-ion batteries. Nano Research, 2018, 11, 5866-5878.	5.8	55
16	LiNi0.8Co0.15Al0.05O2 cathodes exhibiting improved capacity retention and thermal stability due to a lithium iron phosphate coating. Electrochimica Acta, 2019, 312, 179-187.	2.6	50
17	Probing Dynamic Processes in Lithiumâ€Ion Batteries by Inâ€…Situ NMR Spectroscopy: Application to Li_{1.08}Mn_{1.92}O₄ Electrodes. Angewandte Chemie - International Edition, 2015, 54, 14782-14786.	7.2	49
18	Polar surface structure of oxide nanocrystals revealed with solid-state NMR spectroscopy. Nature Communications, 2019, 10, 5420.	5.8	41

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19	Toward Reversible and Moisture-Tolerant Aprotic Lithium-Air Batteries. Joule, 2020, 4, 2501-2520.	11.7	37
20	Response to Comment on â€œCycling Li-O ₂ batteries via LiOH formation and decompositionâ€. Science, 2016, 352, 667-667.	6.0	32
21	Effects of Atmospheric Gases on Li Metal Cyclability and Solid-Electrolyte Interphase Formation. ACS Energy Letters, 2020, 5, 1088-1094.	8.8	29
22	Ordered assemblies of clay nano-platelets. Bioinspiration and Biomimetics, 2008, 3, 016005.	1.5	27
23	Coupling Waterâ€Proof Li Anodes with LiOHâ€Based Cathodes Enables Highly Rechargeable Lithiumâ€"Air Batteries Operating in Ambient Air. Advanced Science, 2022, 9, e2103760.	5.6	25
24	Understanding LiOH Chemistry in a Rutheniumâ€Catalyzed Liâ€"O₂ Battery. Angewandte Chemie, 2017, 129, 16273-16278.	1.6	24
25	Interactions of Oxide Surfaces with Water Revealed with Solid-State NMR Spectroscopy. Journal of the American Chemical Society, 2020, 142, 11173-11182.	6.6	24
26	Low Temperature Synthesis of NH₃ from Atomic N and H at the Surfaces of FeS₂{100} Crystals. Journal of Physical Chemistry C, 2013, 117, 10990-10998.	1.5	18
27	Nitrogen adsorption and desorption at iron pyrite FeS2{100} surfaces. Physical Chemistry Chemical Physics, 2012, 14, 11491.	1.3	16
28	Response to Comment on â€œCycling Li-O ₂ batteries via LiOH formation and decompositionâ€. Science, 2016, 352, 667-667.	6.0	11
29	Characterizing Nitrogen Sites in Nitrogen-Doped Reduced Graphene Oxide: A Combined Solid-State ¹⁵N NMR, XPS, and DFT Approach. Journal of Physical Chemistry C, 2021, 125, 10558-10564.	1.5	10
30	Unraveling the Reaction Interfaces and Intermediates of Ru-Catalyzed LiOH Decomposition in DMSO-Based Liâ€"O₂ Batteries. Journal of Physical Chemistry Letters, 2022, 13, 471-478.	2.1	9
31	Non-dissociative activation of chemisorbed dinitrogen on Ni{110} by co-adsorbed lithium. Journal of Chemical Physics, 2013, 139, 184708.	1.2	6
32	On the Solvation of Redox Mediators and Implications for their Reactivity in Li-Air Batteries. Journal of the Electrochemical Society, 2021, 168, 030529.	1.3	5
33	Cycling Non-Aqueous Lithium-Air Batteries with Dimethyl Sulfoxide and Sulfolane Co-Solvent. Johnson Matthey Technology Review, 2018, 62, 332-340.	0.5	4
34	Increased thermal stability of activated N2 adsorbed on K-promoted Ni{110}. Physical Chemistry Chemical Physics, 2017, 19, 21848-21855.	1.3	3
35	Activity of iron pyrite towards low-temperature ammonia production. Catalysis Today, 2017, 286, 101-113.	2.2	2