

Tao Liu

List of Publications by Citations

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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.

34
papers

1,887
citations

20
h-index

36
g-index

36
ext. papers

2,375
ext. citations

15.8
avg, IF

5
L-index

#	Paper	IF	Citations
34	Cycling Li-O ₂ batteries via LiOH formation and decomposition. <i>Science</i> , 2015 , 350, 530-3	33.3	498
33	Current Challenges and Routes Forward for Nonaqueous Lithium-Air Batteries. <i>Chemical Reviews</i> , 2020 , 120, 6558-6625	68.1	183
32	Understanding Fluoroethylene Carbonate and Vinylene Carbonate Based Electrolytes for Si Anodes in Lithium Ion Batteries with NMR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2018 , 140, 9854-9867	16.4	137
31	Identifying the Structural Basis for the Increased Stability of the Solid Electrolyte Interphase Formed on Silicon with the Additive Fluoroethylene Carbonate. <i>Journal of the American Chemical Society</i> , 2017 , 139, 14992-15004	16.4	119
30	A textile-based SnO ₂ ultra-flexible electrode for lithium-ion batteries. <i>Energy Storage Materials</i> , 2019 , 16, 597-606	19.4	118
29	Hydrophilic microporous membranes for selective ion separation and flow-battery energy storage. <i>Nature Materials</i> , 2020 , 19, 195-202	27	108
28	The Effect of Water on Quinone Redox Mediators in Nonaqueous Li-O Batteries. <i>Journal of the American Chemical Society</i> , 2018 , 140, 1428-1437	16.4	73
27	In situ NMR metrology reveals reaction mechanisms in redox flow batteries. <i>Nature</i> , 2020 , 579, 224-228	50.4	59
26	Understanding LiOH Chemistry in a Ruthenium-Catalyzed Li-O Battery. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 16057-16062	16.4	57
25	Mechanistic Insights into the Challenges of Cycling a Nonaqueous Na-O Battery. <i>Journal of Physical Chemistry Letters</i> , 2016 , 7, 4841-4846	6.4	51
24	Surface-Sensitive NMR Detection of the Solid Electrolyte Interphase Layer on Reduced Graphene Oxide. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 1078-1085	6.4	49
23	Probing Dynamic Processes in Lithium-Ion Batteries by In Situ NMR Spectroscopy: Application to Li _{1.08} Mn _{1.92} O ₄ Electrodes. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 14782-6	16.4	44
22	Large scale computational screening and experimental discovery of novel materials for high temperature CO ₂ capture. <i>Energy and Environmental Science</i> , 2016 , 9, 1346-1360	35.4	43
21	Effects of Antisite Defects on Li Diffusion in LiFePO ₄ Revealed by Li Isotope Exchange. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 12025-12036	3.8	42
20	LiNi _{0.8} Co _{0.15} Al _{0.05} O ₂ cathodes exhibiting improved capacity retention and thermal stability due to a lithium iron phosphate coating. <i>Electrochimica Acta</i> , 2019 , 312, 179-187	6.7	35
19	Understanding LiOH Formation in a Li-O ₂ Battery with LiI and H ₂ O Additives. <i>ACS Catalysis</i> , 2019 , 9, 66-77	13.1	35
18	MoS ₂ /C/C nanofiber with double-layer carbon coating for high cycling stability and rate capability in lithium-ion batteries. <i>Nano Research</i> , 2018 , 11, 5866-5878	10	34

17	Response to Comment on "Cycling Li-O ₂ batteries via LiOH formation and decomposition". <i>Science</i> , 2016 , 352, 667	33.3	29
16	Ordered assemblies of clay nano-platelets. <i>Bioinspiration and Biomimetics</i> , 2008 , 3, 016005	2.6	26
15	Polar surface structure of oxide nanocrystals revealed with solid-state NMR spectroscopy. <i>Nature Communications</i> , 2019 , 10, 5420	17.4	26
14	Low Temperature Synthesis of NH ₃ from Atomic N and H at the Surfaces of FeS ₂ {100} Crystals. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 10990-10998	3.8	17
13	Understanding LiOH Chemistry in a Ruthenium-Catalyzed LiO ₂ Battery. <i>Angewandte Chemie</i> , 2017 , 129, 16273-16278	3.6	15
12	Nitrogen adsorption and desorption at iron pyrite FeS ₂ {100} surfaces. <i>Physical Chemistry Chemical Physics</i> , 2012 , 14, 11491-9	3.6	15
11	Toward Reversible and Moisture-Tolerant Aprotic Lithium-Air Batteries. <i>Joule</i> , 2020 , 4, 2501-2520	27.8	15
10	Effects of Atmospheric Gases on Li Metal Cyclability and Solid-Electrolyte Interphase Formation. <i>ACS Energy Letters</i> , 2020 , 5, 1088-1094	20.1	13
9	Interactions of Oxide Surfaces with Water Revealed with Solid-State NMR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2020 , 142, 11173-11182	16.4	12
8	Response to Comment on "Cycling Li-O ₂ batteries via LiOH formation and decomposition". <i>Science</i> , 2016 , 352, 667-667	33.3	10
7	Coupling Water-Proof Li Anodes with LiOH-Based Cathodes Enables Highly Rechargeable Lithium-Air Batteries Operating in Ambient Air. <i>Advanced Science</i> , 2021 , e2103760	13.6	7
6	Non-dissociative activation of chemisorbed dinitrogen on Ni{110} by co-adsorbed lithium. <i>Journal of Chemical Physics</i> , 2013 , 139, 184708	3.9	4
5	On the Solvation of Redox Mediators and Implications for their Reactivity in Li-Air Batteries. <i>Journal of the Electrochemical Society</i> , 2021 , 168, 030529	3.9	3
4	Activity of iron pyrite towards low-temperature ammonia production. <i>Catalysis Today</i> , 2017 , 286, 101-113	3.3	2
3	Unraveling the Reaction Interfaces and Intermediates of Ru-Catalyzed LiOH Decomposition in DMSO-Based Li-O Batteries. <i>Journal of Physical Chemistry Letters</i> , 2022 , 471-478	6.4	2
2	Characterizing Nitrogen Sites in Nitrogen-Doped Reduced Graphene Oxide: A Combined Solid-State ¹⁵ N NMR, XPS, and DFT Approach. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 10558-10564	3.8	2
1	Increased thermal stability of activated N adsorbed on K-promoted Ni{110}. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 21848-21855	3.6	1