Tao Liu

List of Publications by Year in Descending Order

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	Unraveling the Reaction Interfaces and Intermediates of Ru-Catalyzed LiOH Decomposition in DMSO-Based Li-O Batteries.. *Journal of Physical Chemistry Letters*, **2022**, 471-478	6.4	2
33	Coupling Water-Proof Li Anodes with LiOH-Based Cathodes Enables Highly Rechargeable Lithium-Air Batteries Operating in Ambient Air. *Advanced Science*, **2021**, e2103760	13.6	7
32	On the Solvation of Redox Mediators and Implications for their Reactivity in Li-Air Batteries. *Journal of the Electrochemical Society*, **2021**, 168, 030529	3.9	3
31	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	3.8	2
30	Interactions of Oxide Surfaces with Water Revealed with Solid-State NMR Spectroscopy. *Journal of the American Chemical Society*, **2020**, 142, 11173-11182	16.4	12
29	Effects of Atmospheric Gases on Li Metal Cyclability and Solid-Electrolyte Interphase Formation. *ACS Energy Letters*, **2020**, 5, 1088-1094	20.1	13
28	In situ NMR metrology reveals reaction mechanisms in redox flow batteries. *Nature*, **2020**, 579, 224-228	50.4	59
27	Current Challenges and Routes Forward for Nonaqueous Lithium-Air Batteries. *Chemical Reviews*, **2020**, 120, 6558-6625	68.1	183
26	Hydrophilic microporous membranes for selective ion separation and flow-battery energy storage. *Nature Materials*, **2020**, 19, 195-202	27	108
25	Toward Reversible and Moisture-Tolerant Aprotic Lithium-Air Batteries. *Joule*, **2020**, 4, 2501-2520	27.8	15
24	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	6.7	35
23	A textile-based SnO2 ultra-flexible electrode for lithium-ion batteries. *Energy Storage Materials*, **2019**, 16, 597-606	19.4	118
22	Polar surface structure of oxide nanocrystals revealed with solid-state NMR spectroscopy. *Nature Communications*, **2019**, 10, 5420	17.4	26
21	Understanding LiOH Formation in a Li-O2 Battery with LiI and H2O Additives. *ACS Catalysis*, **2019**, 9, 66-77	13.1	35
20	The Effect of Water on Quinone Redox Mediators in Nonaqueous Li-O Batteries. *Journal of the American Chemical Society*, **2018**, 140, 1428-1437	16.4	73
19	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	16.4	137
18	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	10	34

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17	Activity of iron pyrite towards low-temperature ammonia production. *Catalysis Today*, **2017**, 286, 101-113	5.3	2
16	Surface-Sensitive NMR Detection of the Solid Electrolyte Interphase Layer on Reduced Graphene Oxide. *Journal of Physical Chemistry Letters*, **2017**, 8, 1078-1085	6.4	49
15	Effects of Antisite Defects on Li Diffusion in LiFePO4 Revealed by Li Isotope Exchange. *Journal of Physical Chemistry C*, **2017**, 121, 12025-12036	3.8	42
14	Understanding LiOH Chemistry in a Ruthenium-Catalyzed Li□O2 Battery. *Angewandte Chemie*, **2017**, 129, 16273-16278	3.6	15
13	Understanding LiOH Chemistry in a Ruthenium-Catalyzed Li-O Battery. *Angewandte Chemie - International Edition*, **2017**, 56, 16057-16062	16.4	57
12	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	16.4	119
11	Increased thermal stability of activated N adsorbed on K-promoted Ni{110}. *Physical Chemistry Chemical Physics*, **2017**, 19, 21848-21855	3.6	1
10	Mechanistic Insights into the Challenges of Cycling a Nonaqueous Na-O Battery. *Journal of Physical Chemistry Letters*, **2016**, 7, 4841-4846	6.4	51
9	Large scale computational screening and experimental discovery of novel materials for high temperature CO2 capture. *Energy and Environmental Science*, **2016**, 9, 1346-1360	35.4	43
8	Response to Comment on "Cycling Li-O2 batteries via LiOH formation and decomposition". *Science*, **2016**, 352, 667-667	33.3	10
7	Response to Comment on "Cycling Li-O□batteries via LiOH formation and decomposition". *Science*, **2016**, 352, 667	33.3	29
6	Cycling Li-O□batteries via LiOH formation and decomposition. *Science*, **2015**, 350, 530-3	33.3	498
5	Probing Dynamic Processes in Lithium-Ion Batteries by In Situ NMR Spectroscopy: Application to Li1.08Mn1.92O4 Electrodes. *Angewandte Chemie - International Edition*, **2015**, 54, 14782-6	16.4	44
4	Low Temperature Synthesis of NH3from Atomic N and H at the Surfaces of FeS2{100} Crystals. *Journal of Physical Chemistry C*, **2013**, 117, 10990-10998	3.8	17
3	Non-dissociative activation of chemisorbed dinitrogen on Ni{110} by co-adsorbed lithium. *Journal of Chemical Physics*, **2013**, 139, 184708	3.9	4
2	Nitrogen adsorption and desorption at iron pyrite FeS2{100} surfaces. *Physical Chemistry Chemical Physics*, **2012**, 14, 11491-9	3.6	15
1	Ordered assemblies of clay nano-platelets. *Bioinspiration and Biomimetics*, **2008**, 3, 016005	2.6	26