

# Kun Qian

## List of Publications by Year in descending order

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37  
papers

1,632  
citations

361296  
20  
h-index

360920  
35  
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37  
all docs

37  
docs citations

37  
times ranked

2329  
citing authors

#	ARTICLE	IF	CITATIONS
1	Review of Recent Development of In Situ/Operando Characterization Techniques for Lithium Battery Research. <i>Advanced Materials</i> , 2019, 31, e1806620.	11.1	390
2	A Simple Method for the Complete Performance Recovery of Degraded Ni-rich $\text{LiNi}_{0.70}\text{Co}_{0.15}\text{Mn}_{0.15}\text{O}_2$ Cathode via Surface Reconstruction. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 14076-14084.	4.0	89
3	A dual-functional gel-polymer electrolyte for lithium ion batteries with superior rate and safety performances. <i>Journal of Materials Chemistry A</i> , 2017, 5, 18888-18895.	5.2	85
4	Abuse tolerance behavior of layered oxide-based Li-ion battery during overcharge and over-discharge. <i>RSC Advances</i> , 2016, 6, 76897-76904.	1.7	80
5	Influence of over-discharge on the lifetime and performance of $\text{LiFePO}_4/\text{graphite}$ batteries. <i>RSC Advances</i> , 2016, 6, 30474-30483.	1.7	71
6	State-of-health (SOH) evaluation on lithium-ion battery by simulating the voltage relaxation curves. <i>Electrochimica Acta</i> , 2019, 303, 183-191.	2.6	70
7	Deterioration mechanism of $\text{LiNi}_{0.8}\text{Co}_{0.15}\text{Al}_{0.05}\text{O}_2/\text{graphite}$ "SiO <sub>x</sub> " power batteries under high temperature and discharge cycling conditions. <i>Journal of Materials Chemistry A</i> , 2018, 6, 65-72.	5.2	66
8	Positive film-forming effect of fluoroethylene carbonate (FEC) on high-voltage cycling with three-electrode $\text{LiCoO}_2/\text{Graphite}$ pouch cell. <i>Electrochimica Acta</i> , 2018, 269, 378-387.	2.6	62
9	Deterioration of lithium iron phosphate/graphite power batteries under high-rate discharge cycling. <i>Electrochimica Acta</i> , 2015, 176, 270-279.	2.6	59
10	Interfacial engineering enables Bi@C-TiO microspheres as superpower and long life anode for lithium-ion batteries. <i>Nano Energy</i> , 2018, 51, 137-145.	8.2	55
11	Effects of state of charge on the degradation of $\text{LiFePO}_4/\text{graphite}$ batteries during accelerated storage test. <i>Journal of Alloys and Compounds</i> , 2015, 639, 406-414.	2.8	49
12	Understanding the cathode electrolyte interface formation in aqueous electrolyte by scanning electrochemical microscopy. <i>Journal of Materials Chemistry A</i> , 2019, 7, 12993-12996.	5.2	49
13	Increase and discretization of the energy barrier for individual $\text{LiNi}_x\text{Co}_y\text{Mn}_y\text{O}_2$ ( $x + 2y = 1$ ) particles with the growth of a $\text{Li}_2\text{CO}_3$ surface film. <i>Journal of Materials Chemistry A</i> , 2019, 7, 12723-12731.	5.2	43
14	Study on the reversible capacity loss of layered oxide cathode during low-temperature operation. <i>Journal of Power Sources</i> , 2017, 342, 24-30.	4.0	42
15	The different Li/Na ion storage mechanisms of nano $\text{Sb}_2\text{O}_3$ anchored on graphene. <i>Journal of Power Sources</i> , 2018, 385, 114-121.	4.0	41
16	A Facile Surface Reconstruction Mechanism toward Better Electrochemical Performance of $\text{Li}_4\text{Ti}_5\text{O}_{12}$ in Lithium-Ion Battery. <i>Advanced Science</i> , 2017, 4, 1700205.	5.6	37
17	Insights into the Nanostructure, Solvation, and Dynamics of Liquid Electrolytes through Small-Angle X-Ray Scattering. <i>Advanced Energy Materials</i> , 2021, 11, 2002821.	10.2	37
18	Evolution of Solid Electrolyte Interface on $\text{TiO}_2$ Electrodes in an Aqueous Li-Ion Battery Studied Using Scanning Electrochemical Microscopy. <i>Journal of Physical Chemistry C</i> , 2019, 123, 12797-12806.	1.5	30

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19	Combination Effect of Bulk Structure Change and Surface Rearrangement on the Electrochemical Kinetics of $\text{LiNi}_{0.80}\text{Co}_{0.15}\text{Al}_{0.05}\text{O}_2$ During Initial Charging Processes. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 41370-41379.	4.0	27
20	An Efficient Synthetic Method to Prepare High-Performance Ni-rich $\text{LiNi}_{0.8}\text{Co}_{0.1}\text{Mn}_{0.1}\text{O}_2$ for Lithium-Ion Batteries. <i>ACS Applied Energy Materials</i> , 2019, 2, 7403-7411.	2.5	25
21	Large-scale synthesis of lithium- and manganese-rich materials with uniform thin-film $\text{Al}_2\text{O}_3$ coating for stable cathode cycling. <i>Science China Materials</i> , 2020, 63, 1683-1692.	3.5	23
22	Impact of evolution of cathode electrolyte interface of $\text{Li}(\text{Ni}_{0.8}\text{Co}_{0.1}\text{Mn}_{0.1})\text{O}_2$ on electrochemical performance during high voltage cycling process. <i>Journal of Energy Chemistry</i> , 2020, 47, 72-78.	7.1	20
23	Data-Driven Fast Clustering of Second-Life Lithium-Ion Battery: Mechanism and Algorithm. <i>Advanced Theory and Simulations</i> , 2020, 3, 2000109.	1.3	20
24	Microscopic Understanding of the Ionic Networks of "Water-in-Salt" Electrolytes. <i>Energy Material Advances</i> , 2021, 2021, .	4.7	20
25	Investigation of Interfacial Changes on Grain Boundaries of $\text{Li}(\text{Ni}_{0.5}\text{Co}_{0.2}\text{Mn}_{0.3})\text{O}_2$ in the Initial Overcharge Process. <i>Advanced Materials Interfaces</i> , 2019, 6, 1801764.	1.9	17
26	Understanding Solvation Behavior of the Saturated Electrolytes with Small/Wide-Angle X-ray Scattering and Raman Spectroscopy. <i>Energy &amp; Fuels</i> , 2021, 35, 19849-19855.	2.5	17
27	Decoupling the degradation factors of Ni-rich NMC/Li metal batteries using concentrated electrolytes. <i>Energy Storage Materials</i> , 2021, 41, 222-229.	9.5	16
28	Investigations on the Surface Degradation of $\text{LiNi}_{1/3}\text{Co}_{1/3}\text{Mn}_{1/3}\text{O}_2$ after Storage. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 7378-7385.	3.2	15
29	In-situ polymerized lithium polyacrylate (PAAli) as dual-functional lithium source for high-performance layered oxide cathodes. <i>Electrochimica Acta</i> , 2017, 249, 43-51.	2.6	14
30	A gradient screening approach for retired lithium-ion batteries based on X-ray computed tomography images. <i>RSC Advances</i> , 2020, 10, 19117-19123.	1.7	14
31	Influence of charge rate on the cycling degradation of $\text{LiFePO}_4$ /mesocarbon microbead batteries under low temperature. <i>Ionics</i> , 2017, 23, 1967-1978.	1.2	12
32	Efficient Construction of a C60 Interlayer for Mechanically Robust, Dendrite-free, and Ultrastable Solid-State Batteries. <i>IScience</i> , 2020, 23, 101636.	1.9	11
33	Understanding fluorine-free electrolytes via small-angle X-ray scattering. <i>Journal of Energy Chemistry</i> , 2022, 70, 340-346.	7.1	10
34	Heterogeneous Degradation in Thick Nickel-Rich Cathodes During High-Temperature Storage and Mitigation of Thermal Instability by Regulating Cationic Disorder. <i>Small</i> , 2021, 17, e2102055.	5.2	8
35	A visible to near-infrared nanocrystalline organic photodetector with ultrafast photoresponse. <i>Journal of Materials Chemistry C</i> , 2022, 10, 9391-9400.	2.7	8
36	Revealing the Nanostructures of Liquid Electrolytes By X-Ray Scattering. <i>ECS Meeting Abstracts</i> , 2021, MA2021-01, 464-464.	0.0	0

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37	Heterogeneous Degradation in Thick Nickel-Rich Cathodes During High-Temperature Storage and Mitigation of Thermal Instability by Regulating Cationic Disordering (Small 34/2021). Small, 2021, 17, 2170177.	5.2	0