Baris Key

List of Publications by Year
in descending order

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65	5,935	126907	128289
papers	citations	33 h-index	60 g-index

66	66	66	7232
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	In situ NMR observation of the formation of metallic lithium microstructures in lithium batteries. Nature Materials, 2010, 9, 504-510.	27.5	650
2	Real-Time NMR Investigations of Structural Changes in Silicon Electrodes for Lithium-Ion Batteries. Journal of the American Chemical Society, 2009, 131, 9239-9249.	13.7	634
3	Conversion Reaction Mechanisms in Lithium Ion Batteries: Study of the Binary Metal Fluoride Electrodes. Journal of the American Chemical Society, 2011, 133, 18828-18836.	13.7	492
4	Pair Distribution Function Analysis and Solid State NMR Studies of Silicon Electrodes for Lithium Ion Batteries: Understanding the (De)lithiation Mechanisms. Journal of the American Chemical Society, 2011, 133, 503-512.	13.7	368
5	Electrochemical and Structural Study of the Layered, â€œLi-Excessâ€•Lithium-Ion Battery Electrode Material Li[Li_{1/9}Ni_{1/3}Mn_{5/9}]O₂. Chemistry of Materials, 2009, 21, 2733-2745.	6.7	275
6	Identifying the Local Structures Formed during Lithiation of the Conversion Material, Iron Fluoride, in a Li Ion Battery: A Solid-State NMR, X-ray Diffraction, and Pair Distribution Function Analysis Study. Journal of the American Chemical Society, 2009, 131, 10525-10536.	13.7	263
7	Mechanism of Zn Insertion into Nanostructured Î´-MnO₂: A Nonaqueous Rechargeable Zn Metal Battery. Chemistry of Materials, 2017, 29, 4874-4884.	6.7	225
8	High magnesium mobility in ternary spinel chalcogenides. Nature Communications, 2017, 8, 1759.	12.8	212
9	Ultra-fast NH4+ Storage: Strong H Bonding between NH4+ and Bi-layered V2O5. CheM, 2019, 5, 1537-1551.	11.7	207
10	Layered P2/O3 Intergrowth Cathode: Toward High Power Naâ€ion Batteries. Advanced Energy Materials, 2014, 4, 1400458.	19.5	191
11	Direct Observation of Reversible Magnesium Ion Intercalation into a Spinel Oxide Host. Advanced Materials, 2015, 27, 3377-3384.	21.0	178
12	Re-entrant Lithium Local Environments and Defect Driven Electrochemistry of Li- and Mn-Rich Li-Ion Battery Cathodes. Journal of the American Chemical Society, 2015, 137, 2328-2335.	13.7	173
13	The unexpected discovery of the Mg(HMDS)₂/MgCl₂ complex as a magnesium electrolyte for rechargeable magnesium batteries. Journal of Materials Chemistry A, 2015, 3, 6082-6087.	10.3	137
14	Understanding the Role of Temperature and Cathode Composition on Interface and Bulk: Optimizing Aluminum Oxide Coatings for Li-Ion Cathodes. ACS Applied Materials & Interfaces, 2017, 9, 14769-14778.	8.0	129
15	Is alpha-V2O5 a cathode material for Mg insertion batteries?. Journal of Power Sources, 2016, 323, 44-50.	7.8	108
16	Solution-Based Synthesis and Characterization of Lithium-Ion Conducting Phosphate Ceramics for Lithium Metal Batteries. Chemistry of Materials, 2012, 24, 287-293.	6.7	103
17	From Coating to Dopant: How the Transition Metal Composition Affects Alumina Coatings on Ni-Rich Cathodes. ACS Applied Materials & Interfaces, 2017, 9, 41291-41302.	8.0	102
18	Structural Evolution of Reversible Mg Insertion into a Bilayer Structure of V₂O₅Â·nH₂O Xerogel Material. Chemistry of Materials, 2016, 28, 2962-2969.	6.7	97

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19	Electrochemical Reaction of Lithium with Nanostructured Silicon Anodes: A Study by Inâ€Situ Synchrotron Xâ€Ray Diffraction and Electron Energyâ€Loss Spectroscopy. Advanced Energy Materials, 2013, 3, 1324-1331.	19.5	82
20	First-Cycle Evolution of Local Structure in Electrochemically Activated Li₂MnO₃. Chemistry of Materials, 2014, 26, 7091-7098.	6.7	80
21	Low temperature stabilization of cubic (Li7â^'xAlx/3)La3Zr2O12: role of aluminum during formation. Journal of Materials Chemistry A, 2013, 1, 8813.	10.3	77
22	Solid State NMR Studies of Li₂MnO₃and Li-Rich Cathode Materials: Proton Insertion, Local Structure, and Voltage Fade. Journal of the Electrochemical Society, 2015, 162, A235-A243.	2.9	76
23	Reversible Magnesium Intercalation into a Layered Oxyfluoride Cathode. Chemistry of Materials, 2016, 28, 17-20.	6.7	70
24	Concentration dependent electrochemical properties and structural analysis of a simple magnesium electrolyte: magnesium bis(trifluoromethane sulfonyl)imide in diglyme. RSC Advances, 2016, 6, 113663-113670.	3.6	65
25	Direct Observation of Lattice Aluminum Environments in Li Ion Cathodes LiNi_{1â€“yâ€“z}Co_yAl_zO₂ and Al-Doped LiNi_xMn_yCo_zO₂ via ²⁷Al MAS NMR Spectroscopy. ACS Applied Materials & Interfaces, 2016, 8, 16708-16717.	8.0	63
26	Effect of Cooling Rates on Phase Separation in 0.5Li₂MnO₃Â·0.5LiCoO₂ Electrode Materials for Li-Ion Batteries. Chemistry of Materials, 2014, 26, 3565-3572.	6.7	60
27	Using Mixed Salt Electrolytes to Stabilize Silicon Anodes for Lithium-Ion Batteries via in Situ Formation of Liâ€“Mâ€“Si Ternaries (M = Mg, Zn, Al, Ca). ACS Applied Materials & Interfaces, 2019, 11, 29780-29790.	8.0	60
28	Probing Mg Migration in Spinel Oxides. Chemistry of Materials, 2020, 32, 663-670.	6.7	53
29	Synthesis and Characterization of MgCr₂S₄ Thiospinel as a Potential Magnesium Cathode. Inorganic Chemistry, 2018, 57, 8634-8638.	4.0	50
30	Design of High-Voltage Stable Hybrid Electrolyte with an Ultrahigh Li Transference Number. ACS Energy Letters, 0, , 1315-1323.	17.4	50
31	Intrinsic chemical reactivity of solid-electrolyte interphase components in siliconâ€“lithium alloy anode batteries probed by FTIR spectroscopy. Journal of Materials Chemistry A, 2020, 8, 7897-7906.	10.3	49
32	High Voltage Mg-Ion Battery Cathode via a Solid Solution Crâ€“Mn Spinel Oxide. Chemistry of Materials, 2020, 32, 6577-6587.	6.7	48
33	High Capacity for Mg²⁺ Deintercalation in Spinel Vanadium Oxide Nanocrystals. ACS Energy Letters, 2020, 5, 2721-2727.	17.4	48
34	In Situ NMR Observation of the Temporal Speciation of Lithium Sulfur Batteries during Electrochemical Cycling. Journal of Physical Chemistry C, 2017, 121, 6011-6017.	3.1	43
35	Probing Electrochemical Mg-Ion Activity in MgCr_{2â€“x}V_xO₄ Spinel Oxides. Chemistry of Materials, 2020, 32, 1162-1171.	6.7	31
36	Cation Additive Enabled Rechargeable LiOHâ€Based Lithiumâ€“Oxygen Batteries. Angewandte Chemie - International Edition, 2020, 59, 22978-22982.	13.8	29

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37	Resolving the Different Silicon Clusters in Li₁₂Si₇ by ²⁹Si and ^{6,7}Li Solidâ€State NMR Spectroscopy. Angewandte Chemie - International Edition, 2011, 50, 12591-12594.	13.8	26
38	Silicon Nanoparticles: Stability in Aqueous Slurries and the Optimization of the Oxide Layer Thickness for Optimal Electrochemical Performance. ACS Applied Materials & Interfaces, 2017, 9, 32727-32736.	8.0	26
39	Probing the Reaction between PVDF and LiPAA vs Li₇Si₃: Investigation of Binder Stability for Si Anodes. Journal of the Electrochemical Society, 2019, 166, A2396-A2402.	2.9	25
40	Operando X-ray Diffraction Studies of the Mg-Ion Migration Mechanisms in Spinel Cathodes for Rechargeable Mg-Ion Batteries. Journal of the American Chemical Society, 2021, 143, 10649-10658.	13.7	24
41	Si Oxidation and H₂ Gassing During Aqueous Slurry Preparation for Li-Ion Battery Anodes. Journal of Physical Chemistry C, 2018, 122, 9746-9754.	3.1	23
42	Role of structural hydroxyl groups in enhancing performance of electrochemically-synthesized bilayer V2O5. Nano Energy, 2018, 53, 449-457.	16.0	21
43	Influence of Coating Protocols on Alumina-Coated Cathode Material: Atomic Layer Deposition versus Wet-Chemical Coating. Journal of the Electrochemical Society, 2019, 166, A3679-A3684.	2.9	20
44	Direct Observation of Electron Beam-Induced Phase Transition in MgCrMnO₄. Chemistry of Materials, 2020, 32, 10456-10462.	6.7	18
45	Pristine-state structure of lithium-ion-battery cathode material Li_{1.2}Mn_{0.4}Co_{0.4}O₂ derived from NMR bond pathway analysis. Journal of Materials Chemistry A, 2015, 3, 11471-11477.	10.3	17
46	Effect of Passivating Shells on the Chemistry and Electrode Properties of LiMn₂O₄ Nanocrystal Heterostructures. ACS Applied Materials & Interfaces, 2019, 11, 3823-3833.	8.0	17
47	Silicon Anodes with Improved Calendar Life Enabled By Multivalent Additives. Advanced Energy Materials, 2021, 11, 2101820.	19.5	17
48	Examining CO₂ as an Additive for Solid Electrolyte Interphase Formation on Silicon Anodes. Journal of the Electrochemical Society, 2021, 168, 030534.	2.9	16
49	Probing the Reactivity of the Active Material of a Li-Ion Silicon Anode with Common Battery Solvents. ACS Applied Materials & Interfaces, 2021, 13, 28017-28026.	8.0	14
50	Direct observation of MgO formation at cathode electrolyte interface of a spinel MgCo2O4 cathode upon electrochemical Mg removal and insertion. Journal of Power Sources, 2019, 424, 68-75.	7.8	12
51	Composite of LiFePO₄ with Titanium Phosphate Phases as Lithium-Ion Battery Electrode Material. Journal of Physical Chemistry C, 2013, 117, 21132-21138.	3.1	11
52	Tailoring Alumina Based Interphases on Lithium Ion Cathodes. Journal of the Electrochemical Society, 2018, 165, A3275-A3283.	2.9	11
53	Investigating Ternary Liâ€“Mgâ€“Si Zintl Phase Formation and Evolution for Si Anodes in Li-Ion Batteries with Mg(TFSI)₂ Electrolyte Additive. Chemistry of Materials, 2021, 33, 4960-4970.	6.7	10
54	Intercalation of Ca into a Highly Defective Manganese Oxide at Room Temperature. Chemistry of Materials, 2022, 34, 836-846.	6.7	10

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55	Fundamental Insights from a Singleâ€Crystal Sodium Iridate Battery. Advanced Energy Materials, 2020, 10, 1903128.	19.5	9
56	Nanocrystal heterostructures of LiCoO₂ with conformal passivating shells. Nanoscale, 2018, 10, 6954-6961.	5.6	8
57	Cation Additive Enabled Rechargeable LiOHâ€Based Lithiumâ€“Oxygen Batteries. Angewandte Chemie, 2020, 132, 23178-23182.	2.0	8
58	Electrodes: Layered P2/O3 Intergrowth Cathode: Toward High Power Na-Ion Batteries (Adv. Energy) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	19.5	5
59	Facile Electrochemical Mg-Ion Transport in a Defect-Free Spinel Oxide. Chemistry of Materials, 2022, 34, 3789-3797.	6.7	5
60	Intercalation of Mg into a Few-Layer Phyllomanganate in Nonaqueous Electrolytes at Room Temperature. Chemistry of Materials, 2020, 32, 6014-6025.	6.7	3
61	Electron-beam-induced Spinel to Defect Rocksalt Phase Transition in MgCrMnO₄. Microscopy and Microanalysis, 2020, 26, 788-790.	0.4	1
62	Titelbild: Cation Additive Enabled Rechargeable LiOHâ€Based Lithiumâ€“Oxygen Batteries (Angew. Chem.) Tj ETQq0 0 0 rgBT /Overlock	2.0	0
63	Atomic-scale Insights of Cation Diffusion into Multivalent Battery Cathodes. Microscopy and Microanalysis, 2021, 27, 1498-1501.	0.4	0
64	Solvation and Desolvation Phenomenon and in-Situ NMR Studies on Stripping/Plating of Magnesium Metal in Magnesium Batteries. ECS Meeting Abstracts, 2015, , .	0.0	0
65	Utilization of 29Si MAS-NMR to Understand Solid State Diffusion in Energy Storage Materials. Frontiers in Chemical Engineering, 2022, 4, .	2.7	0