Baris Key

List of Publications by Year
in descending order

65 papers	5,935 citations	126907 33 h-index	128289 60 g-index
66 all docs	66 docs citations	66 times ranked	7232 citing authors

#	ARTICLE	IF	CITATIONS
1	Intercalation of Ca into a Highly Defective Manganese Oxide at Room Temperature. Chemistry of Materials, 2022, 34, 836-846.	6.7	10
2	Facile Electrochemical Mg-Ion Transport in a Defect-Free Spinel Oxide. Chemistry of Materials, 2022, 34, 3789-3797.	6.7	5
3	Utilization of 29Si MAS-NMR to Understand Solid State Diffusion in Energy Storage Materials. Frontiers in Chemical Engineering, 2022, 4, .	2.7	0
4	Examining CO₂ as an Additive for Solid Electrolyte Interphase Formation on Silicon Anodes. Journal of the Electrochemical Society, 2021, 168, 030534.	2.9	16
5	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
6	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
7	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
8	Atomic-scale Insights of Cation Diffusion into Multivalent Battery Cathodes. Microscopy and Microanalysis, 2021, 27, 1498-1501.	0.4	0
9	Silicon Anodes with Improved Calendar Life Enabled By Multivalent Additives. Advanced Energy Materials, 2021, 11, 2101820.	19.5	17
10	Probing Mg Migration in Spinel Oxides. Chemistry of Materials, 2020, 32, 663-670.	6.7	53
11	Probing Electrochemical Mg-Ion Activity in MgCr_{2â€"<i>x</i>}V<i>_x</i>O₄ Spinel Oxides. Chemistry of Materials, 2020, 32, 1162-1171.	6.7	31
12	Cation Additive Enabled Rechargeable LiOHâ€Based Lithiumâ€"Oxygen Batteries. Angewandte Chemie - International Edition, 2020, 59, 22978-22982.	13.8	29
13	High Voltage Mg-Ion Battery Cathode via a Solid Solution Crâ€"Mn Spinel Oxide. Chemistry of Materials, 2020, 32, 6577-6587.	6.7	48
14	Direct Observation of Electron Beam-Induced Phase Transition in MgCrMnO₄. Chemistry of Materials, 2020, 32, 10456-10462.	6.7	18
15	High Capacity for Mg²⁺ Deintercalation in Spinel Vanadium Oxide Nanocrystals. ACS Energy Letters, 2020, 5, 2721-2727.	17.4	48
16	Titelbild: Cation Additive Enabled Rechargeable LiOHâ€Based Lithiumâ€"Oxygen Batteries (Angew. Chem.) Tj ETQq0 0 0 rgBT /Overlock	2.0	0
17	Electron-beam-induced Spinel to Defect Rocksalt Phase Transition in MgCrMnO₄. Microscopy and Microanalysis, 2020, 26, 788-790.	0.4	1
18	Cation Additive Enabled Rechargeable LiOHâ€Based Lithiumâ€"Oxygen Batteries. Angewandte Chemie, 2020, 132, 23178-23182.	2.0	8

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19	Intercalation of Mg into a Few-Layer Phyllomanganate in Nonaqueous Electrolytes at Room Temperature. Chemistry of Materials, 2020, 32, 6014-6025.	6.7	3
20	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
21	Fundamental Insights from a Singleâ€Crystal Sodium Iridate Battery. Advanced Energy Materials, 2020, 10, 1903128.	19.5	9
22	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
23	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
24	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
25	Ultra-fast NH4+ Storage: Strong H Bonding between NH4+ and Bi-layered V2O5. CheM, 2019, 5, 1537-1551.	11.7	207
26	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
27	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
28	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
29	Nanocrystal heterostructures of LiCoO₂ with conformal passivating shells. Nanoscale, 2018, 10, 6954-6961.	5.6	8
30	Tailoring Alumina Based Interphases on Lithium Ion Cathodes. Journal of the Electrochemical Society, 2018, 165, A3275-A3283.	2.9	11
31	Role of structural hydroxyl groups in enhancing performance of electrochemically-synthesized bilayer V2O5. Nano Energy, 2018, 53, 449-457.	16.0	21
32	Synthesis and Characterization of MgCr₂S₄ Thiospinel as a Potential Magnesium Cathode. Inorganic Chemistry, 2018, 57, 8634-8638.	4.0	50
33	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
34	Mechanism of Zn Insertion into Nanostructured Î´-MnO₂: A Nonaqueous Rechargeable Zn Metal Battery. Chemistry of Materials, 2017, 29, 4874-4884.	6.7	225
35	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
36	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

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37	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
38	High magnesium mobility in ternary spinel chalcogenides. Nature Communications, 2017, 8, 1759.	12.8	212
39	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
40	Is alpha-V2O5 a cathode material for Mg insertion batteries?. Journal of Power Sources, 2016, 323, 44-50.	7.8	108
41	Structural Evolution of Reversible Mg Insertion into a Bilayer Structure of V₂O₅Â·<i>n</i>H₂O Xerogel Material. Chemistry of Materials, 2016, 28, 2962-2969.	6.7	97
42	Direct Observation of Lattice Aluminum Environments in Li Ion Cathodes LiNi_{1â€"<i>y</i>â€"<i>z</i>}Co_{<i>y</i>}Al_{<i>z</i>}O₂ and Al-Doped LiNi_{<i>x</i>}Mn_{<i>y</i>}Co_{<i>z</i>}O₂ via ²⁷Al MAS NMR Spectroscopy. ACS Applied Materials & Interfaces, 2016, 8, 16708-16717.	8.0	63
43	Reversible Magnesium Intercalation into a Layered Oxyfluoride Cathode. Chemistry of Materials, 2016, 28, 17-20.	6.7	70
44	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
45	Direct Observation of Reversible Magnesium Ion Intercalation into a Spinel Oxide Host. Advanced Materials, 2015, 27, 3377-3384.	21.0	178
46	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
47	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
48	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
49	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
50	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
51	First-Cycle Evolution of Local Structure in Electrochemically Activated Li₂MnO₃. Chemistry of Materials, 2014, 26, 7091-7098.	6.7	80
52	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
53	Layered P2/O3 Intergrowth Cathode: Toward High Power Naâ€Ion Batteries. Advanced Energy Materials, 2014, 4, 1400458.	19.5	191
54	Low temperature stabilization of cubic (Li7âˆ'xAlx/3)La3Zr2O12: role of aluminum during formation. Journal of Materials Chemistry A, 2013, 1, 8813.	10.3	77

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55	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
56	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
57	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
58	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
59	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
60	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
61	In situ NMR observation of the formation of metallic lithium microstructures in lithium batteries. Nature Materials, 2010, 9, 504-510.	27.5	650
62	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
63	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
64	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
65	Design of High-Voltage Stable Hybrid Electrolyte with an Ultrahigh Li Transference Number. ACS Energy Letters, 0, , 1315-1323.	17.4	50