Doron Aurbach

List of Publications by Year
in descending order

335 papers	47,101 citations	93 h-index (2963)	210 g-index (1820)
346 all docs	346 docs citations	346 times ranked	28184 citing authors

#	Article	IF	Citations
1	Challenges in the development of advanced Li-ion batteries: a review. Energy and Environmental Science, 2011, 4, 3243.	15.6	5,644
2	Promise and reality of post-lithium-ion batteries with high energy densities. Nature Reviews Materials, 2016, 1, .	23.3	3,562
3	Review of selected electrodeâ€“solution interactions which determine the performance of Li and Li ion batteries. Journal of Power Sources, 2000, 89, 206-218.	4.0	1,863
4	A short review of failure mechanisms of lithium metal and lithiated graphite anodes in liquid electrolyte solutions. Solid State Ionics, 2002, 148, 405-416.	1.3	1,480
5	Mg rechargeable batteries: an on-going challenge. Energy and Environmental Science, 2013, 6, 2265.	15.6	1,188
6	Carbon-based composite materials for supercapacitor electrodes: a review. Journal of Materials Chemistry A, 2017, 5, 12653-12672.	5.2	1,152
7	Advances in understanding mechanisms underpinning lithiumâ€“air batteries. Nature Energy, 2016, 1, .	19.8	1,050
8	A review of advanced and practical lithium battery materials. Journal of Materials Chemistry, 2011, 21, 9938.	6.7	952
9	Sulfurâ€Impregnated Activated Carbon Fiber Cloth as a Binderâ€Free Cathode for Rechargeable Liâ€S Batteries. Advanced Materials, 2011, 23, 5641-5644.	11.1	846
10	Current status and future directions of multivalent metal-ion batteries. Nature Energy, 2020, 5, 646-656.	19.8	798
11	Effect of Fluoroethylene Carbonate (FEC) on the Performance and Surface Chemistry of Si-Nanowire Li-Ion Battery Anodes. Langmuir, 2012, 28, 965-976.	1.6	664
12	Review on Liâ€Sulfur Battery Systems: an Integral Perspective. Advanced Energy Materials, 2015, 5, 1500212.	10.2	641
13	Review on electrodeâ€“electrolyte solution interactions, related to cathode materials for Li-ion batteries. Journal of Power Sources, 2007, 165, 491-499.	4.0	619
14	Lithiumâ€“Oxygen Batteries and Related Systems: Potential, Status, and Future. Chemical Reviews, 2020, 120, 6626-6683.	23.0	593
15	Reviewâ€”Recent Advances and Remaining Challenges for Lithium Ion Battery Cathodes. Journal of the Electrochemical Society, 2017, 164, A6220-A6228.	1.3	581
16	Review on Challenges and Recent Advances in the Electrochemical Performance of High Capacity Liâ€ and Mnâ€Rich Cathode Materials for Liâ€Ion Batteries. Advanced Energy Materials, 2018, 8, 1702397.	10.2	475
17	From Surface ZrO₂ Coating to Bulk Zr Doping by High Temperature Annealing of Nickelâ€Rich Lithiated Oxides and Their Enhanced Electrochemical Performance in Lithium Ion Batteries. Advanced Energy Materials, 2018, 8, 1701682.	10.2	443
18	The Correlation Between the Surface Chemistry and the Performance of Liâ€Carbon Intercalation Anodes for Rechargeable â€˜Rockingâ€Chairâ€™ Type Batteries. Journal of the Electrochemical Society, 1994, 141, 603-611.	1.3	428

#	Article	IF	Citations
19	Electrolyte Solutions with a Wide Electrochemical Window for Rechargeable Magnesium Batteries. Journal of the Electrochemical Society, 2008, 155, A103.	1.3	417
20	Fast Charging of Lithiumâ€Ion Batteries: A Review of Materials Aspects. Advanced Energy Materials, 2021, 11, 2101126.	10.2	407
21	The Study of Electrolyte Solutions Based on Ethylene and Diethyl Carbonates for Rechargeable Li Batteries: II . Graphite Electrodes. Journal of the Electrochemical Society, 1995, 142, 2882-2890.	1.3	405
22	The High Performance of Crystal Water Containing Manganese Birnessite Cathodes for Magnesium Batteries. Nano Letters, 2015, 15, 4071-4079.	4.5	400
23	Failure and Stabilization Mechanisms of Graphite Electrodes. Journal of Physical Chemistry B, 1997, 101, 2195-2206.	1.2	399
24	Novel, electrolyte solutions comprising fully inorganic salts with high anodic stability for rechargeable magnesium batteries. Chemical Communications, 2014, 50, 243-245.	2.2	396
25	Very Stable Lithium Metal Strippingâ€"Plating at a High Rate and High Areal Capacity in Fluoroethylene Carbonate-Based Organic Electrolyte Solution. ACS Energy Letters, 2017, 2, 1321-1326.	8.8	372
26	Al Doping for Mitigating the Capacity Fading and Voltage Decay of Layered Li and Mnâ€Rich Cathodes for Liâ€Ion Batteries. Advanced Energy Materials, 2016, 6, 1502398.	10.2	360
27	Charge-transfer materials for electrochemical water desalination, ion separation and the recovery of elements. Nature Reviews Materials, 2020, 5, 517-538.	23.3	360
28	Fluoroethylene Carbonate as an Important Component for the Formation of an Effective Solid Electrolyte Interphase on Anodes and Cathodes for Advanced Li-Ion Batteries. ACS Energy Letters, 2017, 2, 1337-1345.	8.8	350
29	Structural and Electrochemical Aspects of LiNi_{0.8}Co_{0.1}Mn_{0.1}O₂ Cathode Materials Doped by Various Cations. ACS Energy Letters, 2019, 4, 508-516.	8.8	348
30	Electrochemical and Spectroscopic Analysis of Mg²⁺ Intercalation into Thin Film Electrodes of Layered Oxides: V₂O₅ and MoO₃. Langmuir, 2013, 29, 10964-10972.	1.6	346
31	Sonochemical Synthesis of SnO2 Nanoparticles and Their Preliminary Study as Li Insertion Electrodes. Chemistry of Materials, 2000, 12, 2557-2566.	3.2	331
32	Ion Sieving Effects in the Electrical Double Layer of Porous Carbon Electrodes:â€‰ Estimating Effective Ion Size in Electrolytic Solutions. Journal of Physical Chemistry B, 2001, 105, 6880-6887.	1.2	323
33	The behaviour of lithium electrodes in propylene and ethylene carbonate: Te major factors that influence Li cycling efficiency. Journal of Electroanalytical Chemistry, 1992, 339, 451-471.	1.9	317
34	Micromorphological Studies of Lithium Electrodes in Alkyl Carbonate Solutions Using in Situ Atomic Force Microscopy. Journal of Physical Chemistry B, 2000, 104, 12282-12291.	1.2	309
35	NaCrO₂ cathode for high-rate sodium-ion batteries. Energy and Environmental Science, 2015, 8, 2019-2026.	15.6	307
36	Evaluation of (CF₃SO₂)₂N^{â^'}(TFSI) Based Electrolyte Solutions for Mg Batteries. Journal of the Electrochemical Society, 2015, 162, A7118-A7128.	1.3	301

#	Article	IF	Citations
37	Stabilizing nickel-rich layered cathode materials by a high-charge cation doping strategy: zirconium-doped LiNi_{0.6}Co_{0.2}Mn_{0.2}O₂. Journal of Materials Chemistry A, 2016, 4, 16073-16084.	5.2	295
38	Nonaqueous magnesium electrochemistry and its application in secondary batteries. Chemical Record, 2003, 3, 61-73.	2.9	289
39	Solving the Capacitive Paradox of 2D MXene using Electrochemical Quartzâ€Crystal Admittance and In Situ Electronic Conductance Measurements. Advanced Energy Materials, 2015, 5, 1400815.	10.2	283
40	The challenge of developing rechargeable magnesium batteries. MRS Bulletin, 2014, 39, 453-460.	1.7	282
41	Anode-Electrolyte Interfaces in Secondary Magnesium Batteries. Joule, 2019, 3, 27-52.	11.7	275
42	Nanoparticles of SnO Produced by Sonochemistry as Anode Materials for Rechargeable Lithium Batteries. Chemistry of Materials, 2002, 14, 4155-4163.	3.2	265
43	Structural Analysis of Electrolyte Solutions for Rechargeable Mg Batteries by Stereoscopic Means and DFT Calculations. Journal of the American Chemical Society, 2011, 133, 6270-6278.	6.6	264
44	Redox Mediators for Liâ€“O₂ Batteries: Status and Perspectives. Advanced Materials, 2018, 30, 1704162.	11.1	258
45	X-ray Photoelectron Spectroscopy Studies of Lithium Surfaces Prepared in Several Important Electrolyte Solutions. A Comparison with Previous Studies by Fourier Transform Infrared Spectroscopy. Langmuir, 1996, 12, 3991-4007.	1.6	239
46	Electrolyte Solutions for Rechargeable Magnesium Batteries Based on Organomagnesium Chloroaluminate Complexes. Journal of the Electrochemical Society, 2002, 149, A115.	1.3	236
47	Application of a quartz-crystal microbalance to measure ionic fluxes in microporous carbons for energy storage. Nature Materials, 2009, 8, 872-875.	13.3	235
48	Oxidation of Dimethyl Sulfoxide Solutions by Electrochemical Reduction of Oxygen. Journal of Physical Chemistry Letters, 2013, 4, 3115-3119.	2.1	229
49	Liâ€“O₂ cells with LiBr as an electrolyte and a redox mediator. Energy and Environmental Science, 2016, 9, 2334-2345.	15.6	229
50	Long term stability of capacitive de-ionization processes for water desalination: The challenge of positive electrodes corrosion. Electrochimica Acta, 2013, 106, 91-100.	2.6	228
51	New Horizons for Conventional Lithium Ion Battery Technology. Journal of Physical Chemistry Letters, 2014, 5, 3313-3324.	2.1	224
52	Studies of cycling behavior, ageing, and interfacial reactions of LiNi0.5Mn1.5O4 and carbon electrodes for lithium-ion 5-V cells. Journal of Power Sources, 2006, 162, 780-789.	4.0	209
53	The dependence of the performance of Li-C intercalation anodes for Li-ion secondary batteries on the electrolyte solution composition. Electrochimica Acta, 1994, 39, 2559-2569.	2.6	206
54	In Situ Conductivity, Impedance Spectroscopy, and Ex Situ Raman Spectra of Amorphous Silicon during the Insertion/Extraction of Lithium. Journal of Physical Chemistry C, 2007, 111, 11437-11444.	1.5	206

#	Article	IF	Citations
55	The Use of Redox Mediators for Enhancing Utilization of Li₂S Cathodes for Advanced Liâ€"S Battery Systems. Journal of Physical Chemistry Letters, 2014, 5, 915-918.	2.1	206
56	Origin of Structural Degradation During Cycling and Low Thermal Stability of Ni-Rich Layered Transition Metal-Based Electrode Materials. Journal of Physical Chemistry C, 2017, 121, 22628-22636.	1.5	199
57	Layered Cathode Materials for Lithium-Ion Batteries: Review of Computational Studies on LiNi_{1â€"<i>x</i>â€"<i>y</i>}Co_{<i>x</i>}Mn_{<i>y</i>}O₂ and LiNi_{1â€"<i>x</i>â€"<i>y</i>}Co_{<i>x</i>}Al_{<i>y</i>}O₂. Chemistry of Materials, 2020, 32, 915-952.	3.2	196
58	Lithium Polyacrylate (LiPAA) as an Advanced Binder and a Passivating Agent for Highâ€Voltage Liâ€Ion Batteries. Advanced Energy Materials, 2015, 5, 1501008.	10.2	190
59	Understanding the behavior of Liâ€"oxygen cells containing LiI. Journal of Materials Chemistry A, 2015, 3, 8855-8864.	5.2	187
60	Integrated Materials xLi[sub 2]MnO[sub 3]â‹…(1âˆ'x)LiMn[sub 1/3]Ni[sub 1/3]Co[sub 1/3]O[sub 2] (x=0.3,â€‚0.5,â€‚0.7) Synthesized. Journal of the Electrochemical Society, 2010, 157, A1121.	1.3	185
61	X-ray Photoelectron Spectroscopy Study of Surface Films Formed on Li Electrodes Freshly Prepared in Alkyl Carbonate Solutions. Langmuir, 1999, 15, 3334-3342.	1.6	174
62	Critical Role of Crystal Water for a Layered Cathode Material in Sodium Ion Batteries. Chemistry of Materials, 2015, 27, 3721-3725.	3.2	174
63	On the Stability of LiFePO[sub 4] Olivine Cathodes under Various Conditions (Electrolyte Solutions,) Tj ETQq1 1 0.784314 rgBT /Overlo	2.2	166
64	Fluoroethylene Carbonate as an Important Component in Electrolyte Solutions for High-Voltage Lithium Batteries: Role of Surface Chemistry on the Cathode. Langmuir, 2014, 30, 7414-7424.	1.6	166
65	The electrochemistry of activated carbonaceous materials: past, present, and future. Journal of Solid State Electrochemistry, 2011, 15, 1563-1578.	1.2	161
66	Impedance Spectroscopy of Li Electrodes. 4. A General Simple Model of the Liâˆ'Solution Interphase in Polar Aprotic Systems. The Journal of Physical Chemistry, 1996, 100, 3089-3101.	2.9	156
67	A brief review: Past, present and future of lithium ion batteries. Russian Journal of Electrochemistry, 2016, 52, 1095-1121.	0.3	156
68	â€œPetal Effectâ€•on Surfaces Based on Lycopodium: High-Stick Surfaces Demonstrating High Apparent Contact Angles. Journal of Physical Chemistry C, 2009, 113, 5568-5572.	1.5	152
69	Alloy Anode Materials for Rechargeable Mg Ion Batteries. Advanced Energy Materials, 2020, 10, 2000697.	10.2	149
70	Reviewâ€"Recent Advances and Remaining Challenges for Lithium Ion Battery Cathodes. Journal of the Electrochemical Society, 2017, 164, A6341-A6348.	1.3	143
71	A comparative study of electrodes comprising nanometric and submicron particles of LiNi0.50Mn0.50O2, LiNi0.33Mn0.33Co0.33O2, and LiNi0.40Mn0.40Co0.20O2 layered compounds. Journal of Power Sources, 2009, 189, 248-255.	4.0	141
72	On the Challenge of Electrolyte Solutions for Liâ€"Air Batteries: Monitoring Oxygen Reduction and Related Reactions in Polyether Solutions by Spectroscopy and EQCM. Journal of Physical Chemistry Letters, 2013, 4, 127-131.	2.1	139

#	Article	IF	Citations
73	Highâ€Temperature Treatment of Liâ€Rich Cathode Materials with Ammonia: Improved Capacity and Mean Voltage Stability during Cycling. Advanced Energy Materials, 2017, 7, 1700708.	10.2	139
74	Comparison between Na-Ion and Li-Ion Cells: Understanding the Critical Role of the Cathodes Stability and the Anodes Pretreatment on the Cells Behavior. ACS Applied Materials & Interfaces, 2016, 8, 1867-1875.	4.0	138
75	Reviewâ€"Development of Advanced Rechargeable Batteries: A Continuous Challenge in the Choice of Suitable Electrolyte Solutions. Journal of the Electrochemical Society, 2015, 162, A2424-A2438.	1.3	137
76	Exceptionally Active and Stable Spinel Nickel Manganese Oxide Electrocatalysts for Urea Oxidation Reaction. ACS Applied Materials & Interfaces, 2016, 8, 12176-12185.	4.0	130
77	Catalytic Behavior of Lithium Nitrate in Li-O₂ Cells. ACS Applied Materials & Interfaces, 2015, 7, 16590-16600.	4.0	127
78	Thermodynamic and kinetic studies of LiNi_{0.5}Co_{0.2}Mn_{0.3}O₂ as a positive electrode material for Li-ion batteries using first principles. Physical Chemistry Chemical Physics, 2016, 18, 6799-6812.	1.3	126
79	On the Oxidation State of Manganese Ions in Li-Ion Battery Electrolyte Solutions. Journal of the American Chemical Society, 2017, 139, 1738-1741.	6.6	124
80	Studies of Aluminum-Doped LiNi_{0.5}Co_{0.2}Mn_{0.3}O₂: Electrochemical Behavior, Aging, Structural Transformations, and Thermal Characteristics. Journal of the Electrochemical Society, 2015, 162, A1014-A1027.	1.3	121
81	Enhanced Charge Efficiency in Capacitive Deionization Achieved by Surface-Treated Electrodes and by Means of a Third Electrode. Journal of Physical Chemistry C, 2011, 115, 19856-19863.	1.5	120
82	Mechanistic Role of Li⁺ Dissociation Level in Aprotic Liâ€"O₂ Battery. ACS Applied Materials & Interfaces, 2016, 8, 5300-5307.	4.0	120
83	Study of the Lithium-Rich Integrated Compound xLi₂MnO₃Â·(1-x)LiMO₂(x around 0.5; M = Mn, Ni, Co; 2:2:1) and Its Electrochemical Activity as Positive Electrode in Lithium Cells. Journal of the Electrochemical Society, 2013, 160, A324-A337.	1.3	119
84	Unraveling the Effects of Al Doping on the Electrochemical Properties of LiNi_{0.5}Co_{0.2}Mn_{0.3}O₂Using First Principles. Journal of the Electrochemical Society, 2017, 164, A6359-A6365.	1.3	118
85	Li⁺â€Ion Extraction/Insertion of Niâ€Rich Li_{1+<i>x</i>}(Ni_{<i>y</i>}Co_{<i>z</i>}Mn_{<i>z</i>})_{<i>w</i>}O<sub>2</sub (0.005<<i>x</i><0.03; <i>y</i>:<i>z</i>=8:1, <i>w</i>â‰ˆ1) Electrodes: Inâ€...Situ XRD and Raman Spectroscopy Study. ChemElectroChem, 2015, 2, 1479-1486.	1.7	116
86	Comparing the Behavior of Nano- and Microsized Particles of LiMn[sub 1.5]Ni[sub 0.5]O[sub 4] Spinel as Cathode Materials for Li-Ion Batteries. Journal of the Electrochemical Society, 2007, 154, A682.	1.3	110
87	Metalâ€"Sulfur Batteries: Overview and Research Methods. ACS Energy Letters, 2019, 4, 436-446.	8.8	108
88	Surface Modification of Liâ€Rich Mnâ€Based Layered Oxide Cathodes: Challenges, Materials, Methods, and Characterization. Advanced Energy Materials, 2020, 10, 2002506.	10.2	108
89	Horizons for Liâ€Ion Batteries Relevant to Electroâ€Mobility: Highâ€Specificâ€Energy Cathodes and Chemically Active Separators. Advanced Materials, 2018, 30, e1801348.	11.1	105
90	Direct Assessment of Nanoconfined Water in 2D Ti₃C₂ Electrode Interspaces by a Surface Acoustic Technique. Journal of the American Chemical Society, 2018, 140, 8910-8917.	6.6	102

#	Article	IF	Citations
91	Electrochemical Properties of Sulfurized-Polyacrylonitrile Cathode for Lithiumâ€“Sulfur Batteries: Effect of Polyacrylic Acid Binder and Fluoroethylene Carbonate Additive. Journal of Physical Chemistry Letters, 2017, 8, 5331-5337.	2.1	101
92	Leaching Chemistry and the Performance of the Mo6S8Cathodes in Rechargeable Mg Batteries. Chemistry of Materials, 2004, 16, 2832-2838.	3.2	100
93	Unique Behavior of Dimethoxyethane (DME)/Mg(N(SO₂CF₃)₂)₂ Solutions. Journal of Physical Chemistry C, 2016, 120, 19586-19594.	1.5	99
94	Side Reactions in Capacitive Deionization (CDI) Processes: The Role of Oxygen Reduction. Electrochimica Acta, 2016, 220, 285-295.	2.6	99
95	Predicting accurate cathode properties of layered oxide materials using the SCAN meta-GGA density functional. Npj Computational Materials, 2018, 4, .	3.5	99
96	Preparation and Properties of Metal Organic Framework/Activated Carbon Composite Materials. Langmuir, 2016, 32, 4935-4944.	1.6	97
97	Understanding the Role of Minor Molybdenum Doping in LiNi_{0.5}Co_{0.2}Mn_{0.3}O₂ Electrodes: from Structural and Surface Analyses and Theoretical Modeling to Practical Electrochemical Cells. ACS Applied Materials & Interfaces, 2018, 10, 29608-29621.	4.0	97
98	Structural and Electrochemical Evidence of Layered to Spinel Phase Transformation of Li and Mn Rich Layered Cathode Materials of the Formulae xLi[Li_{1/3}Mn_{2/3}]O₂.(1-x)LiMn_{1/3}Ni_{1/3}Co_{1/3}O<sub>2</su	1.3	93
99	Structural Analysis of Magnesium Chloride Complexes in Dimethoxyethane Solutions in the Context of Mg Batteries Research. Journal of Physical Chemistry C, 2017, 121, 24909-24918.	1.5	93
100	In Situ Real-Time Mechanical and Morphological Characterization of Electrodes for Electrochemical Energy Storage and Conversion by Electrochemical Quartz Crystal Microbalance with Dissipation Monitoring. Accounts of Chemical Research, 2018, 51, 69-79.	7.6	92
101	Electrochemical and structural characterization of carbon coated Li1.2Mn0.56Ni0.16Co0.08O2 and Li1.2Mn0.6Ni0.2O2 as cathode materials for Li-ion batteries. Electrochimica Acta, 2014, 137, 546-556.	2.6	91
102	Improving Performance of LiNi_{0.8}Co_{0.1}Mn_{0.1}O₂ Cathode Materials for Lithium-Ion Batteries by Doping with Molybdenum-Ions: Theoretical and Experimental Studies. ACS Applied Energy Materials, 2019, 2, 4521-4534.	2.5	91
103	Structural Analysis of Electrolyte Solutions Comprising Magnesiumâˆ’Aluminate Chloroâˆ’Organic Complexes by Raman Spectroscopy. Organometallics, 2007, 26, 3130-3137.	1.1	89
104	Studies of Li and Mn-Rich Li_x[MnNiCo]O₂Electrodes: Electrochemical Performance, Structure, and the Effect of the Aluminum Fluoride Coating. Journal of the Electrochemical Society, 2013, 160, A2220-A2233.	1.3	87
105	On the Surface Chemistry of LiMO[sub 2] Cathode Materials (M=[MnNi] and [MnNiCo]): Electrochemical, Spectroscopic, and Calorimetric Studies. Journal of the Electrochemical Society, 2010, 157, A1099.	1.3	86
106	Direct Observation of an Anomalous Spinelâ€toâ€Layered Phase Transition Mediated by Crystal Water Intercalation. Angewandte Chemie - International Edition, 2015, 54, 15094-15099.	7.2	86
107	Assessing the Solvation Numbers of Electrolytic Ions Confined in Carbon Nanopores under Dynamic Charging Conditions. Journal of Physical Chemistry Letters, 2011, 2, 120-124.	2.1	83
108	Magnesium Deposition and Dissolution Processes in Ethereal Grignard Salt Solutions Using Simultaneous EQCM-EIS and In Situ FTIR Spectroscopy. Electrochemical and Solid-State Letters, 1999, 3, 31.	2.2	79

#	Article	IF	Citations
109	Novel Cathode Materials for Naâ€Ion Batteries Composed of Spokeâ€Like Nanorods of Na[Ni_{0.61}Co_{0.12}Mn_{0.27}]O₂ Assembled in Spherical Secondary Particles. Advanced Functional Materials, 2016, 26, 8083-8093.	7.8	78
110	On the Electrochemical Behavior of Aluminum Electrodes in Nonaqueous Electrolyte Solutions of Lithium Salts. Journal of the Electrochemical Society, 2010, 157, A423.	1.3	77
111	In situ hydrodynamic spectroscopy for structure characterization of porous energy storageÂelectrodes. Nature Materials, 2016, 15, 570-575.	13.3	77
112	High-Performance Cells Containing Lithium Metal Anodes, LiNi_{0.6}Co_{0.2}Mn_{0.2}O₂ (NCM 622) Cathodes, and Fluoroethylene Carbonate-Based Electrolyte Solution with Practical Loading. ACS Applied Materials & Interfaces, 2018, 10, 19773-19782.	4.0	77
113	Cu2Mo6S8Chevrel Phase, A Promising Cathode Material for New Rechargeable Mg Batteries:Â A Mechanically Induced Chemical Reaction. Chemistry of Materials, 2002, 14, 2767-2773.	3.2	76
114	In Situ AFM Imaging of Surface Phenomena on Composite Graphite Electrodes during Lithium Insertion. Langmuir, 2002, 18, 9000-9009.	1.6	76
115	Micropump based on liquid marbles. Applied Physics Letters, 2010, 97, .	1.5	76
116	Capacitive deionization for wastewater treatment: Opportunities and challenges. Chemosphere, 2020, 241, 125003.	4.2	75
117	Developing Ion Electroadsorption Stereoselectivity, by Pore Size Adjustment with Chemical Vapor Deposition onto Active Carbon Fiber Electrodes. Case of Ca²⁺/Na⁺ Separation in Water Capacitive Desalination. Journal of Physical Chemistry C, 2008, 112, 7385-7389.	1.5	74
118	The use of in situ techniques in R&D of Li and Mg rechargeable batteries. Journal of Solid State Electrochemistry, 2011, 15, 877-890.	1.2	74
119	Alkyl Group Transmetalation Reactions in Electrolytic Solutions Studied by Multinuclear NMR. Organometallics, 2004, 23, 3826-3831.	1.1	72
120	Effect of Fe in suppressing the discharge voltage decay of high capacity Li-rich cathodes for Li-ion batteries. Journal of Solid State Electrochemistry, 2015, 19, 2781-2792.	1.2	71
121	In Situ Electrochemical Quartz Crystal Admittance Methodology for Tracking Compositional and Mechanical Changes in Porous Carbon Electrodes. Journal of Physical Chemistry C, 2013, 117, 14876-14889.	1.5	70
122	In situ real-time gravimetric and viscoelastic probing of surface films formation on lithium batteries electrodes. Nature Communications, 2017, 8, 1389.	5.8	69
123	High Energy Density Rechargeable Batteries Based on Li Metal Anodes. The Role of Unique Surface Chemistry Developed in Solutions Containing Fluorinated Organic Co-solvents. Journal of the American Chemical Society, 2021, 143, 21161-21176.	6.6	69
124	Single-Wall Carbon Nanotube Doping in Lead-Acid Batteries: A New Horizon. ACS Applied Materials & Interfaces, 2017, 9, 3634-3643.	4.0	68
125	In Situ Porous Structure Characterization of Electrodes for Energy Storage and Conversion by EQCM-D: a Review. Electrochimica Acta, 2017, 232, 271-284.	2.6	68
126	Study of Cathode Materials for Lithium-Ion Batteries: Recent Progress and New Challenges. Inorganics, 2017, 5, 32.	1.2	68

#	Article	IF	Citations
127	Composite non-stick droplets and their actuation with electric field. Applied Physics Letters, 2012, 100, .	1.5	65
128	Understanding the influence of Mg doping for the stabilization of capacity and higher discharge voltage of Li- and Mn-rich cathodes for Li-ion batteries. Physical Chemistry Chemical Physics, 2017, 19, 6142-6152.	1.3	65
129	Towards promising electrochemical technology for load leveling applications: extending cycle life of lead acid batteries by the use of carbon nano-tubes (CNTs). Energy and Environmental Science, 2013, 6, 587-594.	15.6	63
130	Reviewâ€"A Comparative Evaluation of Redox Mediators for Li-O₂Batteries: A Critical Review. Journal of the Electrochemical Society, 2018, 165, A2274-A2293.	1.3	63
131	Can Anions Be Inserted into MXene?. Journal of the American Chemical Society, 2021, 143, 12552-12559.	6.6	63
132	On the challenge of large energy storage by electrochemical devices. Electrochimica Acta, 2020, 354, 136771.	2.6	62
133	Optimized Bicompartment Two Solution Cells for Effective and Stable Operation of Liâ€"O₂ Batteries. Advanced Energy Materials, 2017, 7, 1701232.	10.2	61
134	The Effect of ZnO and MgO Coatings by a Sono-Chemical Method, on the Stability of LiMn_{1.5}Ni_{0.5}O₄as a Cathode Material for 5 V Li-Ion Batteries. Journal of the Electrochemical Society, 2012, 159, A228-A237.	1.3	59
135	The Study of Surface Films Formed on Lithium and Noble Metal Electrodes in Polar Aprotic Systems By the Use of In Situ Fourier Transform Infrared Spectroscopy. Journal of the Electrochemical Society, 1993, 140, L1-L4.	1.3	57
136	In Situ Monitoring of Gravimetric and Viscoelastic Changes in 2D Intercalation Electrodes. ACS Energy Letters, 2017, 2, 1407-1415.	8.8	56
137	Hierarchical activated carbon microfiber (ACM) electrodes for rechargeable Liâ€"O2 batteries. Journal of Materials Chemistry A, 2013, 1, 5021.	5.2	54
138	Reviewâ€"Multifunctional Materials for Enhanced Li-Ion Batteries Durability: A Brief Review of Practical Options. Journal of the Electrochemical Society, 2017, 164, A6315-A6323.	1.3	54
139	The Effect of Specific Adsorption of Cations and Their Size on the Charge-Compensation Mechanism in Carbon Micropores: The Role of Anion Desorption. ChemPhysChem, 2011, 12, 854-862.	1.0	53
140	Increasing the durability of Li-ion batteries by means of manganese ion trapping materials with nitrogen functionalities. Journal of Power Sources, 2017, 341, 457-465.	4.0	53
141	On the Feasibility of Practical Mgâ€"S Batteries: Practical Limitations Associated with Metallic Magnesium Anodes. ACS Applied Materials & Interfaces, 2018, 10, 36910-36917.	4.0	51
142	EQCM-D technique for complex mechanical characterization of energy storage electrodes: Background and practical guide. Energy Storage Materials, 2019, 21, 399-413.	9.5	51
143	The Sodium Storage Mechanism in Tunnelâ€Type Na_{0.44}MnO₂ Cathodes and the Way to Ensure Their Durable Operation. Advanced Energy Materials, 2020, 10, 2000564.	10.2	51
144	Reactivity of Amide Based Solutions in Lithiumâ€"Oxygen Cells. Journal of Physical Chemistry C, 2014, 118, 15207-15213.	1.5	50

#	Article	IF	Citations
145	Electrochemical Performance of Li- and Mn-Rich Cathodes in Full Cells with Prelithiated Graphite Negative Electrodes. ACS Energy Letters, 2017, 2, 544-548.	8.8	49
146	Li4Ti5O12/LiMnPO4 Lithium-Ion Battery Systems for Load Leveling Application. Journal of the Electrochemical Society, 2011, 158, A790.	1.3	48
147	Acid-Scavenging Separators: A Novel Route for Improving Li-Ion Batteriesâ€™ Durability. ACS Energy Letters, 2017, 2, 2388-2393.	8.8	48
148	XPS Investigation of Surface Chemistry of Magnesium Electrodes in Contact with Organic Solutions of Organochloroaluminate Complex Salts. Langmuir, 2003, 19, 2344-2348.	1.6	47
149	Elastic properties of liquid marbles. Colloid and Polymer Science, 2015, 293, 2157-2164.	1.0	47
150	Understanding the Effect of Lithium Bis(oxalato) Borate (LiBOB) on the Structural and Electrochemical Aging of Li and Mn Rich High Capacity Li_{1.2}Ni_{0.16}Mn_{0.56}Co_{0.08}O₂Cathodes. Journal of the Electrochemical Society, 2015, 162, A596-A602.	1.3	47
151	Hexafluorophosphate-Based Solutions for Mg Batteries and the Importance of Chlorides. Langmuir, 2017, 33, 9472-9478.	1.6	47
152	TEM and Raman spectroscopy evidence of layered to spinel phase transformation in layered LiNi1/3Mn1/3Co1/3O2 upon cycling to higher voltages. Journal of Electroanalytical Chemistry, 2014, 733, 6-19.	1.9	46
153	Electrochemical Performance of a Layered-Spinel Integrated Li[Ni_{1/3}Mn_{2/3}]O₂ as a High Capacity Cathode Material for Li-Ion Batteries. Chemistry of Materials, 2015, 27, 2600-2611.	3.2	46
154	Solvent Effects on the Reversible Intercalation of Magnesiumâ€Ions into V₂O₅ Electrodes. ChemElectroChem, 2018, 5, 3514-3524.	1.7	46
155	Microsphere Na_{0.65}[Ni_{0.17}Co_{0.11}Mn_{0.72}]O₂ Cathode Material for High-Performance Sodium-Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 44534-44541.	4.0	46
156	Multifunctional Manganese Ions Trapping and Hydrofluoric Acid Scavenging Separator for Lithium Ion Batteries Based on Poly(ethyleneâ€<i>alternate</i>â€maleic acid) Dilithium Salt. Advanced Energy Materials, 2017, 7, 1601556.	10.2	45
157	Anion Effects on Cathode Electrochemical Activity in Rechargeable Magnesium Batteries: A Case Study of V₂O₅. ACS Energy Letters, 2019, 4, 209-214.	8.8	45
158	Lithiumï£¿Oxygen Electrochemistry in Nonâ€Aqueous Solutions. Israel Journal of Chemistry, 2015, 55, 508-520.	1.0	44
159	Bromide Ions Specific Removal and Recovery by Electrochemical Desalination. Environmental Science & Technology, 2018, 52, 6275-6281.	4.6	44
160	Chevrel Phases, M_{<i>x</i>}Mo₆T₈ (M = Metals, T = S, Se, Te) as a Structural Chameleon: Changes in the Rhombohedral Framework and Triclinic Distortion. Chemistry of Materials, 2010, 22, 3678-3692.	3.2	43
161	Combined Electron Paramagnetic Resonance and Atomic Absorption Spectroscopy/Inductively Coupled Plasma Analysis As Diagnostics for Soluble Manganese Species from Mn-Based Positive Electrode Materials in Li-ion Cells. Analytical Chemistry, 2016, 88, 4440-4447.	3.2	43
162	Studies of the Electrochemical Behavior of LiNi_{0.80}Co_{0.15}Al_{0.05}O₂Electrodes Coated with LiAlO₂. Journal of the Electrochemical Society, 2017, 164, A3266-A3275.	1.3	43

#	Article	IF	Citations
163	Microwave-assisted synthesis of tin sulfide nanoflakes and their electrochemical performance as Li-inserting materials. Journal of Solid State Electrochemistry, 2006, 11, 186-194.	1.2	42
164	Boron doped Ni-rich LiNi0.85Co0.10Mn0.05O2 cathode materials studied by structural analysis, solid state NMR, computational modeling, and electrochemical performance. Energy Storage Materials, 2021, 42, 594-607.	9.5	42
165	Remarkably Improved Electrochemical Performance of Li- and Mn-Rich Cathodes upon Substitution of Mn with Ni. ACS Applied Materials & Interfaces, 2017, 9, 4309-4319.	4.0	39
166	Electrically Deformable Liquid Marbles. Journal of Adhesion Science and Technology, 2011, 25, 1371-1377.	1.4	38
167	Largeâ€Scale Liï£¿O₂ Pouch Type Cells for Practical Evaluation and Applications. Advanced Functional Materials, 2017, 27, 1605500.	7.8	38
168	New Insights Related to Rechargeable Lithium Batteries: Li Metal Anodes, Ni Rich LiNi_xCo_yMn_zO₂ Cathodes and Beyond Them. Journal of the Electrochemical Society, 2019, 166, A5265-A5274.	1.3	38
169	Mass-producible polyhedral macrotube carbon arrays with multi-hole cross-section profiles: superb 3D tertiary porous electrode materials for supercapacitors and capacitive deionization cells. Journal of Materials Chemistry A, 2020, 8, 16312-16322.	5.2	38
170	Enhancement of Structural, Electrochemical, and Thermal Properties of High-Energy Density Ni-Rich LiNi_{0.85}Co_{0.1}Mn_{0.05}O₂ Cathode Materials for Li-Ion Batteries by Niobium Doping. ACS Applied Materials & Interfaces, 2021, 13, 34145-34156.	4.0	38
171	The use of a special work station for in situ measurements of highly reactive electrochemical systems by atomic force and scanning tunneling microscopes. Review of Scientific Instruments, 1999, 70, 4668-4675.	0.6	37
172	In Situ Tracking of Ion Insertion in Iron Phosphate Olivine Electrodes via Electrochemical Quartz Crystal Admittance. Journal of Physical Chemistry C, 2013, 117, 1247-1256.	1.5	37
173	Vacancyâ€Driven High Rate Capabilities in Calciumâ€Doped Na_{0.4}MnO₂ Cathodes for Aqueous Sodiumâ€Ion Batteries. Advanced Energy Materials, 2020, 10, 2002077.	10.2	37
174	High-Performance LiNiO₂ Cathodes with Practical Loading Cycled with Li metal Anodes in Fluoroethylene Carbonate-Based Electrolyte Solution. ACS Applied Energy Materials, 2018, 1, 2600-2607.	2.5	36
175	Anomalous Sodium Storage Behavior in Al/F Dualâ€Doped P2â€Type Sodium Manganese Oxide Cathode for Sodiumâ€Ion Batteries. Advanced Energy Materials, 2020, 10, 2002205.	10.2	36
176	Superhydrophobic Metallic Surfaces and Their Wetting Properties. Journal of Adhesion Science and Technology, 2008, 22, 379-385.	1.4	35
177	Development of Anion Stereoselective, Activated Carbon Molecular Sieve Electrodes Prepared by Chemical Vapor Deposition. Journal of Physical Chemistry C, 2009, 113, 7316-7321.	1.5	35
178	Collective Phase Transition Dynamics in Microarray Composite Li_{<i>x</i>}FePO₄ Electrodes Tracked by in Situ Electrochemical Quartz Crystal Admittance. Journal of Physical Chemistry C, 2013, 117, 15505-15514.	1.5	35
179	Electrochemical performance of Na_{0.6}[Li_{0.2}Ni_{0.2}Mn_{0.6}]O₂ cathodes with high-working average voltage for Na-ion batteries. Journal of Materials Chemistry A, 2017, 5, 5858-5864.	5.2	35
180	Fluorination of Liâ€Rich Lithiumâ€Ionâ€Battery Cathode Materials by Fluorine Gas: Chemistry, Characterization, and Electrochemical Performance in Half Cells. ChemElectroChem, 2019, 6, 3337-3349.	1.7	35

#	Article	IF	Citations
181	The Role of Surface Adsorbed Cl^{â€“} Complexes in Rechargeable Magnesium Batteries. ACS Catalysis, 2020, 10, 7773-7784.	5.5	35
182	2,4-Dimethoxy-2,4-dimethylpentan-3-one: An Aprotic Solvent Designed for Stability in Liâ€“O2 Cells. Journal of the American Chemical Society, 2017, 139, 11690-11693.	6.6	34
183	Li/Fe substitution in Li-rich Ni, Co, Mn oxides for enhanced electrochemical performance as cathode materials. Journal of Materials Chemistry A, 2019, 7, 15215-15224.	5.2	34
184	The Power of Stoichiometry: Conditioning and Speciation of MgCl₂/AlCl₃ in Tetraethylene Glycol Dimethyl Ether-Based Electrolytes. ACS Applied Materials & Interfaces, 2019, 11, 24057-24066.	4.0	34
185	Evaluating the High-Voltage Stability of Conductive Carbon and Ethylene Carbonate with Various Lithium Salts. Journal of the Electrochemical Society, 2020, 167, 160522.	1.3	34
186	Study of the Most Relevant Aspects Related to Hard Carbons as Anode Materials for Naâ€ion Batteries, Compared with Liâ€ion Systems. Israel Journal of Chemistry, 2015, 55, 1260-1274.	1.0	32
187	LiNi_{0.8}Co_{0.15}Al_{0.05}O₂ Cathode Material: New Insights via ⁷Li and ²⁷Al Magic-Angle Spinning NMR Spectroscopy. Chemistry of Materials, 2016, 28, 7594-7604.	3.2	32
188	Superfast high-energy storage hybrid device composed of MXene and Chevrel-phase electrodes operated in saturated LiCl electrolyte solution. Journal of Materials Chemistry A, 2019, 7, 19761-19773.	5.2	32
189	New aqueous energy storage devices comprising graphite cathodes, MXene anodes and concentrated sulfuric acid solutions. Energy Storage Materials, 2020, 32, 1-10.	9.5	32
190	Proton-Selective Environment in the Pores of Activated Molecular Sieving Carbon Electrodes. Journal of Physical Chemistry B, 2002, 106, 10128-10134.	1.2	31
191	Nonâ€Invasive Inâ€…Situ Dynamic Monitoring of Elastic Properties of Composite Battery Electrodes by EQCMâ€Ð. Angewandte Chemie - International Edition, 2015, 54, 12353-12356.	7.2	31
192	Improving Stability of Li-Ion Batteries by Means of Transition Metal Ions Trapping Separators. Journal of the Electrochemical Society, 2016, 163, A1083-A1094.	1.3	31
193	Feasibility of Full (Li-Ion)â€“O₂ Cells Comprised of Hard Carbon Anodes. ACS Applied Materials & Interfaces, 2017, 9, 4352-4361.	4.0	31
194	Electrolyte Solutions for Rechargeable Li-Ion Batteries Based on Fluorinated Solvents. ACS Applied Energy Materials, 2020, 3, 7485-7499.	2.5	31
195	Oxidation Stability of Organic Redox Mediators as Mobile Catalysts in Lithiumâ€“Oxygen Batteries. ACS Energy Letters, 2020, 5, 2122-2129.	8.8	31
196	Operating Highly Stable LiCoO₂ Cathodes up to 4.6ÂVÂby Using an Effective Integration of Surface Engineering and Electrolyte Solutions Selection. Advanced Functional Materials, 2022, 32, .	7.8	31
197	Systematic First-Principles Investigation of Mixed Transition Metal Olivine Phosphates LiM_{1-y}Mâ€²_{<i>y</i>}PO₄ (M/Mâ€² = Mn, Fe, and Co) as Cathode Materials. Journal of Physical Chemistry C, 2013, 117, 17919-17926.	1.5	30
198	An Advanced Lithium Ion Battery Based on Amorphous Silicon Film Anode and Integrated xLi2MnO3.(1-x)LiNiyMnzCo1-y-zO2 Cathode. ECS Electrochemistry Letters, 2013, 2, A84-A87.	1.9	30

#	Article	IF	Citations
199	Understanding the Role of Alumina (Al₂O₃), Pentalithium Aluminate (Li₅AlO₄), and Pentasodium Aluminate (Na₅AlO₄) Coatings on the Li and Mnâ€Rich NCM Cathode Material 0.33Li₂MnO₃Â·0.67Li(Ni_{0.4}Co_{0.2}Mn_{0.4})O₂ for Enhanced Electrochemical Performance. Advanced Functional Materials, 2021, 31, 2008083.	7.8	30
200	Improved capacity and stability of integrated Li and Mn rich layered-spinel Li_{1.17}Ni_{0.25}Mn_{1.08}O₃ cathodes for Li-ion batteries. Journal of Materials Chemistry A, 2015, 3, 14598-14608.	5.2	29
201	Classical and Quantum Modeling of Li and Na Diffusion in FePO₄. Journal of Physical Chemistry C, 2015, 119, 15801-15809.	1.5	29
202	A Scaledâ€Up Lithium (Ion)â€Sulfur Battery: Newly Faced Problems and Solutions. Advanced Materials Technologies, 2016, 1, 1600052.	3.0	29
203	Sodium oxygen batteries: one step further with catalysis by ruthenium nanoparticles. Journal of Materials Chemistry A, 2017, 5, 20678-20686.	5.2	29
204	In Situ Acoustic Diagnostics of Particle-Binder Interactions in Battery Electrodes. Joule, 2018, 2, 988-1003.	11.7	29
205	Enhanced Performance of Ti3C2Tx (MXene) Electrodes in Concentrated ZnCl2 Solutions: A Combined Electrochemical and EQCM-D Study. Energy Storage Materials, 2021, 38, 535-541.	9.5	29
206	Electrochemical and Diffusional Investigation of Na₂Fe^{II}PO₄F Fluorophosphate Sodium Insertion Material Obtained from Fe^{III} Precursor. ACS Applied Materials & Interfaces, 2017, 9, 34961-34969.	4.0	28
207	NMR-Detected Dynamics of Sodium Co-Intercalation with Diglyme Solvent Molecules in Graphite Anodes Linked to Prolonged Cycling. Journal of Physical Chemistry C, 2018, 122, 21172-21184.	1.5	27
208	The preparation of metal-polymer composite materials using ultrasound radiation. Journal of Materials Research, 1998, 13, 211-216.	1.2	26
209	Freeâ€Standing, Thermostable, Micrometerâ€Scale Honeycomb Polymer Films and their Properties. Macromolecular Materials and Engineering, 2008, 293, 872-877.	1.7	26
210	Quartz Crystal Impedance Response of Nonhomogenous Composite Electrodes in Contact with Liquids. Analytical Chemistry, 2011, 83, 9614-9621.	3.2	26
211	Carbon Negative Electrodes for Li-Ion Batteries: The Effect of Solutions and Temperatures. Journal of the Electrochemical Society, 2014, 161, A1422-A1431.	1.3	26
212	The importance of solvent selection in Liâ€“O₂ cells. Chemical Communications, 2017, 53, 3269-3272.	2.2	26
213	Studies of Spinel-to-Layered Structural Transformations in LiMn₂O₄ Electrodes Charged to High Voltages. Journal of Physical Chemistry C, 2017, 121, 9120-9130.	1.5	26
214	Tunnelâ€Type Sodium Manganese Oxide Cathodes for Sodiumâ€Ion Batteries. ChemElectroChem, 2021, 8, 798-811.	1.7	26
215	Enhanced capacity and lower mean charge voltage of Li-rich cathodes for lithium ion batteries resulting from low-temperature electrochemical activation. RSC Advances, 2017, 7, 7116-7121.	1.7	25
216	Stabilized Behavior of LiNi_{0.85}Co_{0.10}Mn_{0.05}O₂ Cathode Materials Induced by Their Treatment with SO₂. ACS Applied Energy Materials, 2020, 3, 3609-3618.	2.5	25

#	Article	IF	Citations
217	AZ31 Magnesium Alloy Foils as Thin Anodes for Rechargeable Magnesium Batteries. ChemSusChem, 2021, 14, 4690-4696.	3.6	24
218	Failure and Stabilization Mechanisms in Multiply Cycled Conducting Polymers for Energy Storage Devices. Journal of Physical Chemistry C, 2010, 114, 16823-16831.	1.5	23
219	On the Nature of the Breath Figures Selfâ€Assembly in Evaporated Polymer Solutions: Revisiting Physical Factors Governing the Patterning. Macromolecular Chemistry and Physics, 2012, 213, 1742-1747.	1.1	23
220	Sonochemical synthesis of LiNi0.5Mn1.5O4 and its electrochemical performance as a cathode material for 5 V Li-ion batteries. Ultrasonics Sonochemistry, 2015, 26, 332-339.	3.8	23
221	Novel<i>in situ</i>multiharmonic EQCM-D approach to characterize complex carbon pore architectures for capacitive deionization of brackish water. Journal of Physics Condensed Matter, 2016, 28, 114001.	0.7	23
222	Aprotic metal-oxygen batteries: recent findings and insights. Journal of Solid State Electrochemistry, 2017, 21, 1861-1878.	1.2	23
223	In Situ Multilength-Scale Tracking of Dimensional and Viscoelastic Changes in Composite Battery Electrodes. ACS Applied Materials & Interfaces, 2017, 9, 27664-27675.	4.0	23
224	Enhancement of Structural, Electrochemical, and Thermal Properties of Niâ€Rich LiNi_{0.85}Co_{0.1}Mn_{0.05}O₂ Cathode Materials for Liâ€Ion Batteries by Al and Ti Doping. Batteries and Supercaps, 2021, 4, 221-231.	2.4	23
225	High Performance Aqueous and Nonaqueous Ca-Ion Cathodes Based on Fused-Ring Aromatic Carbonyl Compounds. ACS Energy Letters, 2021, 6, 2659-2665.	8.8	23
226	Electrochemical Quartz Crystal Microbalance with Dissipation Real-Time Hydrodynamic Spectroscopy of Porous Solids in Contact with Liquids. Analytical Chemistry, 2016, 88, 10151-10157.	3.2	22
227	Reaching Highly Stable Specific Capacity with Integrated 0.6Li₂MnO₃â€‰:â€‰0.4LiNi_{0.6}Co_{0.2}Mn_{0.2}O₂ Cathode Materials. ChemElectroChem, 2018, 5, 1137-1146.	1.7	22
228	Reviewâ€"Multifunctional Separators: A Promising Approach for Improving the Durability and Performance of Li-Ion Batteries. Journal of the Electrochemical Society, 2019, 166, A5369-A5377.	1.3	22
229	Ultrafine Ruthenium Oxide Nanoparticles Supported on Molybdenum Oxide Nanosheets as Highly Efficient Electrocatalyst for Hydrogen Evolution in Acidic Medium. ChemCatChem, 2019, 11, 1495-1502.	1.8	22
230	Influences of Cationsâ€™ Solvation on Charge Storage Performance in Polyimide Anodes for Aqueous Multivalent Ion Batteries. ACS Energy Letters, 2021, 6, 2638-2644.	8.8	22
231	Organized Silica Microspheres Carrying Ferromagnetic Cobalt Nanoparticles as a Basis for Tip Arrays in Magnetic Force Microscopy. Journal of Physical Chemistry B, 1998, 102, 10234-10242.	1.2	21
232	Highâ€Performance Lithiumâ€"Sulfur Batteries Based on Ionicâ€Liquid Electrolytes with Bis(fluorolsufonyl)imide Anions and Sulfurâ€Encapsulated Highly Disordered Activated Carbon. ChemElectroChem, 2014, 1, 1492-1496.	1.7	21
233	Enhancement of Electrochemical Performance of Lithium and Manganese-Rich Cathode Materials via Thermal Treatment with SO₂. Journal of the Electrochemical Society, 2020, 167, 110563.	1.3	21
234	A reliable method of manufacturing metallic hierarchical superhydrophobic surfaces. Applied Physics Letters, 2009, 94, .	1.5	19

#	Article	IF	Citations
235	Characterizations of self-combustion reactions (SCR) for the production of nanomaterials used as advanced cathodes in Li-ion batteries. Thermochimica Acta, 2009, 493, 96-104.	1.2	19
236	Metalâ€"organic complexes as redox candidates for carbon based pseudo-capacitors. Journal of Materials Chemistry A, 2014, 2, 18132-18138.	5.2	19
237	Synthesis and Electrochemical Performance of Nickel-Rich Layered-Structure LiNi0.65Co0.08Mn0.27O2Cathode Materials Comprising Particles with Ni and Mn Full Concentration Gradients. Journal of the Electrochemical Society, 2016, 163, A1348-A1358.	1.3	19
238	Ammonia Treatment of 0.35Li₂MnO₃Â·0.65LiNi_{0.35}Mn_{0.45}Co_{0.20}O<sub>2</sub Material: Insights from Solid-State NMR Analysis. Journal of Physical Chemistry C, 2018, 122, 3773-3779.	1.5	19
239	Na-ion battery cathode materials prepared by electrochemical ion exchange from alumina-coated Li_{1+x}Mn_{0.54}Co_{0.13}Ni_{0.1+y}O₂. Journal of Materials Chemistry A, 2018, 6, 14816-14827.	5.2	19
240	Improved Performance of Li-metalâˆ£LiNi_{0.8}Co_{0.1}Mn_{0.1}O₂ Cells with High-Loading Cathodes and Small Amounts of Electrolyte Solutions Containing Fluorinated Carbonates at 30 Â°Câ€"55 Â°C. Journal of the Electrochemical Society, 2020, 167, 070509.	1.3	19
241	Unraveling the Role of Fluorinated Alkyl Carbonate Additives in Improving Cathode Performance in Sodium-Ion Batteries. ACS Applied Materials & Interfaces, 2021, 13, 46478-46487.	4.0	19
242	On the Practical Applications of the Magnesium Fluorinated Alkoxyaluminate Electrolyte in Mg Battery Cells. ACS Applied Materials & Interfaces, 2022, 14, 26766-26774.	4.0	19
243	Lattice strains in the layered Mn, Ni and Co oxides as cathode materials in Li and Na batteries. Solid State Ionics, 2014, 264, 54-68.	1.3	18
244	High-Voltage Supercapacitors with Solutions Based on Adiponitrile Solvent. Journal of the Electrochemical Society, 2017, 164, A231-A236.	1.3	18
245	Studies of Nickel-Rich LiNi0.85Co0.10Mn0.05O2 Cathode Materials Doped with Molybdenum Ions for Lithium-Ion Batteries. Materials, 2021, 14, 2070.	1.3	18
246	Review on Engineering and Characterization of Activated Carbon Electrodes for Electrochemical Double Layer Capacitors and Separation Processes. Israel Journal of Chemistry, 2008, 48, 287-303.	1.0	17
247	Highâ€Capacity Layeredâ€Spinel Cathodes for Liâ€Ion Batteries. ChemSusChem, 2016, 9, 2404-2413.	3.6	17
248	Diffusion-Induced Transient Stresses in Li-Battery Electrodes Imaged by Electrochemical Quartz Crystal Microbalance with Dissipation Monitoring and Environmental Scanning Electron Microscopy. ACS Energy Letters, 2019, 4, 1907-1917.	8.8	17
249	Enhanced capacitive deionization of an integrated membrane electrode by thin layer spray-coating of ion exchange polymers on activated carbon electrode. Desalination, 2020, 491, 114460.	4.0	17
250	Modification of Li- and Mn-Rich Cathode Materials <i>via</i> Formation of the Rock-Salt and Spinel Surface Layers for Steady and High-Rate Electrochemical Performances. ACS Applied Materials & Interfaces, 2020, 12, 32698-32711.	4.0	17
251	Double gas treatment: A successful approach for stabilizing the Li and Mn-rich NCM cathode materialsâ€™ electrochemical behavior. Energy Storage Materials, 2022, 45, 74-91.	9.5	17
252	Stabilizing High-Voltage Lithium-Ion Battery Cathodes Using Functional Coatings of 2D Tungsten Diselenide. ACS Energy Letters, 2022, 7, 1383-1391.	8.8	17

#	Article	IF	Citations
253	Bond-valence model for metal cluster compounds. II. Matrix effect. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2013, 69, 426-438.	0.5	16
254	Thermal processes in the systems with Li-battery cathode materials and LiPF6 -based organic solutions. Journal of Solid State Electrochemistry, 2014, 18, 2333-2342.	1.2	16
255	Multiphase LiNi_{0.33}Mn_{0.54}Co_{0.13}O₂ Cathode Material with High Capacity Retention for Liâ€‘ion Batteries. ChemElectroChem, 2015, 2, 1957-1965.	1.7	16
256	Investigation of Li 1.17 Ni 0.20 Mn 0.53 Co 0.10 O 2 as an Interesting Liâ€•and Mnâ€Rich Layered Oxide Cathode Material through Electrochemistry, Microscopy, and Inâ€…Situ Electrochemical Dilatometry. ChemElectroChem, 2019, 6, 2812-2819.	1.7	16
257	Sol-Gel-Derived Carbon Ceramic Electrodes: A New Lithium Intercalation Anode. Advanced Materials, 1998, 10, 577-580.	11.1	15
258	Lattice Strains in the Ligand Framework in the Octahedral Metal Cluster Compounds as the Origin of Their Instability. Chemistry of Materials, 2011, 23, 1901-1914.	3.2	15
259	Controllable and stable organometallic redox mediators for lithium oxygen batteries. Materials Horizons, 2020, 7, 214-222.	6.4	15
260	Novel Inorganic Integrated Membrane Electrodes for Membrane Capacitive Deionization. ACS Applied Materials & Interfaces, 2021, 13, 46537-46548.	4.0	15
261	Evaluation of Mg[B(HFIP)₄]₂-Based Electrolyte Solutions for Rechargeable Mg Batteries. ACS Applied Materials & Interfaces, 2021, 13, 54894-54905.	4.0	15
262	Several basic and practical aspects related to electrochemical deionization of water. AIChE Journal, 2010, 56, 779-789.	1.8	14
263	The effect of synthesis and zirconium doping on the performance of nickel-rich NCM622 cathode materials for Li-ion batteries. Journal of Solid State Electrochemistry, 2021, 25, 1513-1530.	1.2	14
264	Polysulfone Membranes Demonstrating Asymmetric Diode-like Water Permeability and Their Applications. Macromolecular Materials and Engineering, 2014, 299, 27-30.	1.7	13
265	Electrochemical and Structural Studies of LiNi_{0.85}Co_{0.1}Mn_{0.05}O₂, a Cathode Material for High Energy Density Li-Ion Batteries, Stabilized by Doping with Small Amounts of Tungsten. Journal of the Electrochemical Society, 2021, 168, 060552.	1.3	13
266	The crystal structure of the inorganic surface films formed on Mg and Li intercalation compounds and the electrode performance. Journal of Solid State Electrochemistry, 2006, 10, 176-184.	1.2	12
267	Singleâ€step technique allowing formation of microscaled thermally stable polymer honeycomb reliefs demonstrating reversible wettability. Polymers for Advanced Technologies, 2011, 22, 94-98.	1.6	12
268	Crystal chemistry and valence determinations for Mn, Ni and Co oxides as cathode materials in Li batteries. Solid State Ionics, 2014, 257, 1-8.	1.3	12
269	Porous, hollow Li1.2Mn0.53Ni0.13Co0.13O2 microspheres as a positive electrode material for Li-ion batteries. Journal of Solid State Electrochemistry, 2017, 21, 437-445.	1.2	12
270	Improving Amorphous Carbon Anodes for Na Ion Batteries by Surface Treatment of a Presodiated Electrode with Al₂O₃. Langmuir, 2019, 35, 11670-11678.	1.6	12

#	Article	IF	Citations
271	Fluorination of Niâ€Rich Lithiumâ€Ion Battery Cathode Materials by Fluorine Gas: Chemistry, Characterization, and Electrochemical Performance in Fullâ€cells. Batteries and Supercaps, 2021, 4, 632-645.	2.4	12
272	Highly Doped Silicon Electrodes for the Electrochemical Modification of Self-Assembled Siloxane-Anchored Monolayers:â€‰ A Feasibility Study. Langmuir, 2001, 17, 1608-1619.	1.6	11
273	Bond-valence model for metal cluster compounds. I. Common lattice strains. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2013, 69, 419-425.	0.5	11
274	Is it True That the Normal Valenceâ€Length Correlation Is Irrelevant for Metalâ€“Metal Bonds?. Chemistry - A European Journal, 2016, 22, 5269-5276.	1.7	11
275	X-ray Photodecomposition of Bis(trifluoromethanesulfonyl)imide, Bis(fluorosulfonyl)imide, and Hexafluorophosphate. Journal of Physical Chemistry C, 2017, 121, 3744-3751.	1.5	11
276	Bond Order Conservation Principle and Peculiarities of the Metalâ€“Metal Bonding. Inorganic Chemistry, 2018, 57, 15550-15557.	1.9	11
277	Quantification of porosity in extensively nanoporous thin films in contact with gases and liquids. Nature Communications, 2019, 10, 4394.	5.8	11
278	How solution chemistry affects the electrochemical behavior of cathodes for Mg batteries, a classical electroanalytical study. Electrochimica Acta, 2020, 334, 135614.	2.6	11
279	Electrochemical Activation of Li2MnO3 Electrodes at 0 Â°C and Its Impact on the Subsequent Performance at Higher Temperatures. Materials, 2020, 13, 4388.	1.3	11
280	Electrochemical quartz crystal admittance studies of ion adsorption on nanoporous composite carbon electrodes in aprotic solutions. Journal of Solid State Electrochemistry, 2014, 18, 1335-1344.	1.2	10
281	Shaped composite liquid marbles. Journal of Colloid and Interface Science, 2014, 417, 206-209.	5.0	10
282	Do the basic crystal chemistry principles agree with a plethora of recent quantum chemistry data?. IUCrJ, 2018, 5, 542-547.	1.0	10
283	SiO₂-Modified Separators: Stability in LiPF₆-Containing Electrolyte Solutions and Effect on Cycling Performance of Li Batteries. Journal of the Electrochemical Society, 2019, 166, A1685-A1691.	1.3	10
284	A revisit of the bond valence model makes it universal. Physical Chemistry Chemical Physics, 2020, 22, 13839-13849.	1.3	10
285	Sustainable existence of solid mercury (Hg) nanoparticles at room temperature and their applications. Chemical Science, 2021, 12, 3226-3238.	3.7	10
286	Multinuclear Magnetic Resonance Spectroscopy and Density Function Theory Calculations for the Identification of the Equilibrium Species in THF Solutions of Organometallic Complexes Suitable As Electrolyte Solutions for Rechargeable Mg Batteries. Organometallics, 2013, 32, 3165-3173.	1.1	9
287	Investigation of Graphite Foil as Current Collector for Positive Electrodes of Li-Ion Batteries. Journal of the Electrochemical Society, 2013, 160, A581-A587.	1.3	9
288	The Feasibility of Energy Extraction from Acidic Wastewater by Capacitive Mixing with a Molecularâ€Sieving Carbon Electrode. ChemSusChem, 2016, 9, 3426-3433.	3.6	9

#	Article	IF	Citations
289	Elucidating the Li-Ion Battery Performance Benefits Enabled by Multifunctional Separators. ACS Applied Energy Materials, 2018, 1, 1878-1882.	2.5	9
290	Electrochemical Determination of Diffusion Coefficients of Iron (II) Ions in Chloride Melts at 700-750Â°C. Israel Journal of Chemistry, 2007, 47, 409-414.	1.0	8
291	Electronic Effect Related to the Nonuniform Distribution of Ionic Charges in Metal-Cluster Chalcogenide Halides. European Journal of Inorganic Chemistry, 2014, 2014, 3736-3746.	1.0	8
292	Stable LiNi_{0.8}Co_{0.1}Mn_{0.1}O₂ | Li Metal Cells with Practical Loading at 30 Degrees C and Elevated Temperatures. Journal of the Electrochemical Society, 2019, 166, A2834-A2839.	1.3	8
293	Interaction between Electrolytes and Sb₂O₃â€Based Electrodes in Sodium Batteries: Uncovering the Detrimental Effects of Diglyme. ChemElectroChem, 2020, 7, 3487-3495.	1.7	8
294	Electrochemical and Thermal Behavior of Modified Li and Mnâ€Rich Cathode Materials in Battery Prototypes: Impact of Pentasodium Aluminate Coating and Comprehensive Understanding of Its Evolution upon Cycling through Solidâ€State Nuclear Magnetic Resonance Analysis. Advanced Energy and Sustainability Research, 2021, 2, 2000089.	2.8	8
295	Alumina thin coat on pre-charged soft carbon anode reduces electrolyte breakdown and maintains sodiation sites active in Na-ion battery â€" Insights from NMR measurements. Journal of Solid State Chemistry, 2021, 298, 122121.	1.4	8
296	Li/graphene oxide primary battery system and mechanism. , 2022, 1, .		8
297	IDENTIFICATION OF SURFACE FILMS ON ELECTRODES IN NON-AQUEOUS ELECTROLYTE SOLUTIONS: SPECTROSCOPIC, ELECTRONIC AND MORPHOLOGICAL STUDIES. , 2004, , 70-139.		7
298	Wetting Transitions on Post-Built and Porous Reliefs. Journal of Adhesion Science and Technology, 2012, 26, 1169-1180.	1.4	7
299	LNMOâ€Graphite Cells Performance Enhancement by the Use of Acid Scavenging Separators. ChemElectroChem, 2019, 6, 3690-3698.	1.7	7
300	Robust method of manufacturing rubber wasteâ€based water repellent surfaces. Polymers for Advanced Technologies, 2009, 20, 650-653.	1.6	6
301	Shedding Light on the Oxygen Reduction Reaction Mechanism in Ether-Based Electrolyte Solutions: A Study Using Operando UVâ€"Vis Spectroscopy. ACS Applied Materials & Interfaces, 2018, 10, 10860-10869.	4.0	6
302	The Ratio between the Surface Charge and Electrode's Capacitance as a Fast Tool for Assessing the Charge Efficiency in Capacitive Deionization Processes. Journal of the Electrochemical Society, 2019, 166, H119-H125.	1.3	6
303	Unidirectional electron injection and accelerated proton transport in bacteriorhodopsin based Bio-p-n junctions. Biosensors and Bioelectronics, 2021, 173, 112811.	5.3	6
304	Metalâ€"Metal Bond in the Light of Paulingâ€™s Rules. Molecules, 2021, 26, 304.	1.7	6
305	Horizons for Modern Electrochemistry Related to Energy Storage and Conversion, a Review. Israel Journal of Chemistry, 2021, 61, 11-25.	1.0	6
306	Nonâ€Invasive Inâ€…Situ Dynamic Monitoring of Elastic Properties of Composite Battery Electrodes by EQCMâ€D. Angewandte Chemie, 2015, 127, 12530-12533.	1.6	5

#	Article	IF	Citations
307	Aqueous Energy Storage Device Based on LiMn 2 O 4 (Spinel) Positive Electrode and Anthraquinoneâ€Modified Carbonâ€Negative Electrode. Energy Technology, 2019, 7, 1900589.	1.8	5
308	Modulation, Characterization, and Engineering of Advanced Materials for Electrochemical Energy Storage Applications: MoO3/V2O5 Bilayer Model System. Journal of Physical Chemistry C, 2019, 123, 16577-16587.	1.5	5
309	Assessing the Strength of Metalâ€"Metal Interactions. Inorganic Chemistry, 2019, 58, 7466-7471.	1.9	5
310	Battery Systems Based on Multivalent Metals and Metal Ions. Series on Chemistry, Energy and the Environment, 2018, , 237-318.	0.3	5
311	The effects of geometry on magnetic response of elliptical PHE sensors. Journal of Applied Physics, 2010, 107, 09E716.	1.1	4
312	Effect of sonochemistry: Li- and Mn-rich layered high specific capacity cathode materials for Li-ion batteries. Journal of Solid State Electrochemistry, 2016, 20, 1683-1695.	1.2	4
313	In situ tracking of hydrodynamic and viscoelastic changes in electrophoretically deposited LiFePO4 electrodes during their charging/discharging. Russian Journal of Electrochemistry, 2017, 53, 980-993.	0.3	4
314	Practical anodes for Li-ion batteries comprising metallurgical silicon particles and multiwall carbon nanotubes. Journal of Solid State Electrochemistry, 2018, 22, 3289-3301.	1.2	4
315	Boosting Tunnel-Type Manganese Oxide Cathodes by Lithium Nitrate for Practical Aqueous Na-Ion Batteries. ACS Applied Energy Materials, 2020, 3, 10744-10751.	2.5	4
316	Steric and Electrostatic Effects in Compounds with Centered Clusters Quantified by Bond Order Analysis. Crystal Growth and Design, 2020, 20, 2115-2122.	1.4	4
317	Multifold Electrochemical Protons and Zinc Ion Storage Behavior in Copper Vanadate Cathodes. ACS Applied Energy Materials, 2021, 4, 10197-10202.	2.5	4
318	Improved Electrochemical Behavior and Thermal Stability of Li and Mn-Rich Cathode Materials Modified by Lithium Sulfate Surface Treatment. Inorganics, 2022, 10, 39.	1.2	4
319	Improved High-Energy Na-NCM Cathode Prepared by Ion Exchange Route via Application of Various ALD Treatments. Journal of the Electrochemical Society, 2021, 168, 010537.	1.3	3
320	Al-Doped Co-Free Layered-Spinel Mn/Ni Oxides as High-Capacity Cathode Materials for Advanced Li-Ion Batteries. ACS Applied Energy Materials, 2022, 5, 4279-4287.	2.5	3
321	Introduction to the Focus Issue of Selected Presentations from the International Meeting on Lithium Batteries (IMLB 2014). Journal of the Electrochemical Society, 2015, 162, Y1-Y1.	1.3	2
322	Li-S Batteries: A Scaled-Up Lithium (Ion)-Sulfur Battery: Newly Faced Problems and Solutions (Adv.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	3.0	2
323	Electrolyte Solutions for â€œBeyond Li-Ion Batteriesâ€: Li-S, Li-O₂, and Mg Batteries. Electrochemical Society Interface, 2019, 28, 71-77.	0.3	2
324	Combined nanofiltration and advanced oxidation processes with bifunctional carbon nanomembranes. RSC Advances, 2021, 11, 14777-14786.	1.7	2

#	Article	IF	Citations
325	Critical Review on the Unique Interactions and Electroanalytical Challenges Related to Cathodes â€• Solutions Interfaces in Nonâ€Aqueous Mg Battery Prototypes. ChemElectroChem, 2021, 8, 3229-3238.	1.7	2
326	Lithiumâ€Oxygen Batteries: Optimized Bicompartment Two Solution Cells for Effective and Stable Operation of Liâ€“O₂ Batteries (Adv. Energy Mater. 21/2017). Advanced Energy Materials, 2017, 7, .	10.2	1
327	Selected future tasks in electrochemical research related to advanced power sources. Journal of Solid State Electrochemistry, 2020, 24, 2027-2029.	1.2	1
328	Redox Potential and Crystal Chemistry of Hexanuclear Cluster Compounds. Molecules, 2021, 26, 3069.	1.7	1
329	Reply to Comment on Highly Doped Silicon Electrodes for the Electrochemical Modification of Self-Assembled Siloxane-Anchored Monolayers: A Feasibility Study. Langmuir, 2002, 18, 960-960.	1.6	0
330	The 60thÂbirthday of Mikhail A. Vorotyntsev. Journal of Solid State Electrochemistry, 2006, 10, 123-124.	1.2	0
331	Foreword by the Guest Editor: Electrochemistry. Israel Journal of Chemistry, 2008, 48, NA-NA.	1.0	0
332	Intelligent Design vs. Evolution Theory. , 2008, , 686-707.		0
333	Methodological aspects of electrochemical science and technology: a selection of reviews. Journal of Solid State Electrochemistry, 2011, 15, 859-860.	1.2	0
334	Mikhail A. Vorotyntsevâ€"a tribute on the occasion of his 70th birthday. Journal of Solid State Electrochemistry, 2015, 19, 2507-2509.	1.2	0
335	Liâ€O₂ Batteries: Largeâ€Scale Liï£¿O₂ Pouch Type Cells for Practical Evaluation and Applications (Adv. Funct. Mater. 11/2017). Advanced Functional Materials, 2017, 27, .	7.8	0