Martin Winter

List of Publications by Citations

287 papers	13,520 citations	55 h-index	110 g-index
318 ext. papers	17,345 ext. citations	9.4 avg, IF	7.33 L-index

#	Paper	IF	Citations
287	Performance and cost of materials for lithium-based rechargeable automotive batteries. *Nature Energy*, **2018**, 3, 267-278	62.3	1290
286	Before Li Ion Batteries. *Chemical Reviews*, **2018**, 118, 11433-11456	68.1	956
285	Will advanced lithium-alloy anodes have a chance in lithium-ion batteries?. *Journal of Power Sources*, **1997**, 68, 87-90	8.9	798
284	Lithium ion, lithium metal, and alternative rechargeable battery technologies: the odyssey for high energy density. *Journal of Solid State Electrochemistry*, **2017**, 21, 1939-1964	2.6	541
283	The Solid Electrolyte Interphase The Most Important and the Least Understood Solid Electrolyte in Rechargeable Li Batteries. *Zeitschrift Fur Physikalische Chemie*, **2009**, 223, 1395-1406	3.1	503
282	Current research trends and prospects among the various materials and designs used in lithium-based batteries. *Journal of Applied Electrochemistry*, **2013**, 43, 481-496	2.6	316
281	Mechanical Surface Modification of Lithium Metal: Towards Improved Li Metal Anode Performance by Directed Li Plating. *Advanced Functional Materials*, **2015**, 25, 834-841	15.6	294
280	Carbon Coated ZnFe2O4 Nanoparticles for Advanced Lithium-Ion Anodes. *Advanced Energy Materials*, **2013**, 3, 513-523	21.8	292
279	Dual-graphite cells based on the reversible intercalation of bis(trifluoromethanesulfonyl)imide anions from an ionic liquid electrolyte. *Energy and Environmental Science*, **2014**, 7, 3412-3423	35.4	284
278	Best Practice: Performance and Cost Evaluation of Lithium Ion Battery Active Materials with Special Emphasis on Energy Efficiency. *Chemistry of Materials*, **2016**, 28, 7203-7217	9.6	254
277	Theoretical versus Practical Energy: A Plea for More Transparency in the Energy Calculation of Different Rechargeable Battery Systems. *Advanced Energy Materials*, **2019**, 9, 1803170	21.8	195
276	A rechargeable zinc-air battery based on zinc peroxide chemistry. *Science*, **2021**, 371, 46-51	33.3	185
275	Pre-Lithiation Strategies for Rechargeable Energy Storage Technologies: Concepts, Promises and Challenges. *Batteries*, **2018**, 4, 4	5.7	167
274	Investigations on novel electrolytes, solvents and SEI additives for use in lithium-ion batteries: Systematic electrochemical characterization and detailed analysis by spectroscopic methods. *Progress in Solid State Chemistry*, **2014**, 42, 65-84	8	159
273	Structural Changes in Li2MnO3 Cathode Material for Li-Ion Batteries. *Advanced Energy Materials*, **2014**, 4, 1300998	21.8	154
272	Post-lithium-ion battery cell production and its compatibility with lithium-ion cell production infrastructure. *Nature Energy*, **2021**, 6, 123-134	62.3	153
271	Dilatometric Investigations of Graphite Electrodes in Nonaqueous Lithium Battery Electrolytes. *Journal of the Electrochemical Society*, **2000**, 147, 2427	3.9	152

270	A Step toward High-Energy Silicon-Based Thin Film Lithium Ion Batteries. *ACS Nano*, **2017**, 11, 4731-4744	16.7	141
269	Studies on the Anode/Electrolyte Interfacein Lithium Ion Batteries. *Monatshefte Fü Chemie*, **2001**, 132, 473-486	1.4	136
268	Ultra-high cycling stability of poly(vinylphenothiazine) as a battery cathode material resulting from Interactions. *Energy and Environmental Science*, **2017**, 10, 2334-2341	35.4	130
267	How Do Reactions at the Anode/Electrolyte Interface Determine the Cathode Performance in Lithium-Ion Batteries?. *Journal of the Electrochemical Society*, **2013**, 160, A542-A548	3.9	126
266	A reality check and tutorial on electrochemical characterization of battery cell materials: How to choose the appropriate cell setup. *Materials Today*, **2020**, 32, 131-146	21.8	122
265	Influence of graphite surface modifications on the ratio of basal plane to Ion-basal plane surface area and on the anode performance in lithium ion batteries. *Journal of Power Sources*, **2012**, 200, 83-91	8.9	115
264	Puzzling out the origin of the electrochemical activity of black P as a negative electrode material for lithium-ion batteries. *Journal of Materials Chemistry A*, **2013**, 1, 5293	13	114
263	Melting Behavior of Pyrrolidinium-Based Ionic Liquids and Their Binary Mixtures. *Journal of Physical Chemistry C*, **2010**, 114, 12364-12369	3.8	113
262	Surface Modification of Ni-Rich LiNiCoMnO Cathode Material by Tungsten Oxide Coating for Improved Electrochemical Performance in Lithium-Ion Batteries. *ACS Applied Materials & Interfaces*, **2019**, 11, 18404-18414	9.5	104
261	Lithium-Metal Foil Surface Modification: An Effective Method to Improve the Cycling Performance of Lithium-Metal Batteries. *Advanced Materials Interfaces*, **2017**, 4, 1700166	4.6	101
260	Graphite Recycling from Spent Lithium-Ion Batteries. *ChemSusChem*, **2016**, 9, 3473-3484	8.3	98
259	In situ X-ray Diffraction Studies of Cation and Anion Inter calation into Graphitic Carbons for Electrochemical Energy Storage Applications. *Zeitschrift Fur Anorganische Und Allgemeine Chemie*, **2014**, 640, 1996-2006	1.3	98
258	Impact of cycling at low temperatures on the safety behavior of 18650-type lithium ion cells: Combined study of mechanical and thermal abuse testing accompanied by post-mortem analysis. *Journal of Power Sources*, **2016**, 334, 1-11	8.9	93
257	Changing Established Belief on Capacity Fade Mechanisms: Thorough Investigation of LiNi1/3Co1/3Mn1/3O2 (NCM111) under High Voltage Conditions. *Journal of Physical Chemistry C*, **2017**, 121, 1521-1529	3.8	89
256	Lithium Metal Polymer Electrolyte Batteries: Opportunities and Challenges. *Electrochemical Society Interface*, **2019**, 28, 55-61	3.6	86
255	Poly(Ethylene Oxide)-based Electrolyte for Solid-State-Lithium-Batteries with High Voltage Positive Electrodes: Evaluating the Role of Electrolyte Oxidation in Rapid Cell Failure. *Scientific Reports*, **2020**, 10, 4390	4.9	84
254	Ion chromatography electrospray ionization mass spectrometry method development and investigation of lithium hexafluorophosphate-based organic electrolytes and their thermal decomposition products. *Journal of Chromatography A*, **2014**, 1354, 92-100	4.5	84
253	Synthesis and Characterization of Nanoporous NiSi-Si Composite Anode for Lithium-Ion Batteries. *Journal of the Electrochemical Society*, **2007**, 154, A97	3.9	82

252	Cross Talk between Transition Metal Cathode and Li Metal Anode: Unraveling Its Influence on the Deposition/Dissolution Behavior and Morphology of Lithium. *Advanced Energy Materials*, **2019**, 9, 1900574	21.8	80
251	Nano-porous SiO/carbon composite anode for lithium-ion batteries. *Journal of Applied Electrochemistry*, **2009**, 39, 1643-1649	2.6	78
250	Reversible Storage of Lithium in Three-Dimensional Macroporous Germanium. *Chemistry of Materials*, **2014**, 26, 5683-5688	9.6	77
249	Triphenylphosphine Oxide as Highly Effective Electrolyte Additive for Graphite/NMC811 Lithium Ion Cells. *Chemistry of Materials*, **2018**, 30, 2726-2741	9.6	74
248	Toward Green Battery Cells: Perspective on Materials and Technologies. *Small Methods*, **2020**, 4, 2000039	12.8	73
247	Li-rich cathodes for rechargeable Li-based batteries: reaction mechanisms and advanced characterization techniques. *Energy and Environmental Science*, **2020**, 13, 4450-4497	35.4	72
246	Extraction of lithium-ion battery electrolytes with liquid and supercritical carbon dioxide and additional solvents. *RSC Advances*, **2015**, 5, 43209-43217	3.7	71
245	Supercritical carbon dioxide extraction of lithium-ion battery electrolytes. *Journal of Supercritical Fluids*, **2014**, 94, 216-222	4.2	69
244	Mechanistic insights into lithium ion battery electrolyte degradation - a quantitative NMR study. *Physical Chemistry Chemical Physics*, **2016**, 18, 26595-26601	3.6	69
243	Cu3P Binary Phosphide: Synthesis via a Wet Mechanochemical Method and Electrochemical Behavior as Negative Electrode Material for Lithium-Ion Batteries. *Advanced Energy Materials*, **2013**, 3, 231-238	21.8	68
242	Fast Charging of Lithium-Ion Batteries: A Review of Materials Aspects. *Advanced Energy Materials*, **2021**, 11, 2101126	21.8	65
241	High Voltage LiNiMnO/LiTiO Lithium Ion Cells at Elevated Temperatures: Carbonate- versus Ionic Liquid-Based Electrolytes. *ACS Applied Materials & Interfaces*, **2016**, 8, 25971-25978	9.5	64
240	Qualitative and quantitative investigation of organophosphates in an electrochemically and thermally treated lithium hexafluorophosphate-based lithium ion battery electrolyte by a developed liquid chromatography-tandem quadrupole mass spectrometry method. *RSC Advances*, **2016**, 6, 8-17	3.7	63
239	Synthesis and Characterization of High-Energy, High-Power Spinel-Layered Composite Cathode Materials for Lithium-Ion Batteries. *Advanced Energy Materials*, **2015**, 5, 1401156	21.8	61
238	The Mechanism of SEI Formation on a Single Crystal Si(100) Electrode. *Journal of the Electrochemical Society*, **2015**, 162, A603-A607	3.9	61
237	Identification of alkylated phosphates by gas chromatography-mass spectrometric investigations with different ionization principles of a thermally aged commercial lithium ion battery electrolyte. *Journal of Chromatography A*, **2015**, 1394, 128-36	4.5	59
236	New Insights to Self-Aggregation in Ionic Liquid Electrolytes for High-Energy Electrochemical Devices. *Advanced Energy Materials*, **2011**, 1, 274-281	21.8	59
235	Impact of Selected LiPF Hydrolysis Products on the High Voltage Stability of Lithium-Ion Battery Cells. *ACS Applied Materials & Interfaces*, **2016**, 8, 30871-30878	9.5	58

234	Anodic Behavior of the Aluminum Current Collector in Imide-Based Electrolytes: Influence of Solvent, Operating Temperature, and Native Oxide-Layer Thickness. *ChemSusChem*, **2017**, 10, 804-814	8.3	55
233	Silicon/Polyaniline Nanocomposites as Anode Material for Lithium Ion Batteries. *Journal of the Electrochemical Society*, **2014**, 161, A40-A45	3.9	55
232	Improved cycle lives of LiMn2O4 cathodes in lithium ion batteries by an alginate biopolymer from seaweed. *Journal of Materials Chemistry A*, **2013**, 1, 15224	13	55
231	Study of decomposition products by gas chromatography-mass spectrometry and ion chromatography-electrospray ionization-mass spectrometry in thermally decomposed lithium hexafluorophosphate-based lithium ion battery electrolytes. *RSC Advances*, **2015**, 5, 80150-80157	3.7	54
230	Two-dimensional ion chromatography for the separation of ionic organophosphates generated in thermally decomposed lithium hexafluorophosphate-based lithium ion battery electrolytes. *Journal of Chromatography A*, **2015**, 1409, 201-9	4.5	53
229	Counterintuitive Role of Magnesium Salts as Effective Electrolyte Additives for High Voltage Lithium-Ion Batteries. *Advanced Materials Interfaces*, **2016**, 3, 1600096	4.6	53
228	Lifetime limit of tris(trimethylsilyl) phosphite as electrolyte additive for high voltage lithium ion batteries. *RSC Advances*, **2016**, 6, 38342-38349	3.7	53
227	Iron-Catalyzed Graphitic Carbon Materials from Biomass Resources as Anodes for Lithium-Ion Batteries. *ChemSusChem*, **2018**, 11, 2776-2787	8.3	49
226	Copper-coordinated cellulose ion conductors for solid-state batteries. *Nature*, **2021**, 598, 590-596	50.4	49
225	Unlocking Full Discharge Capacities of Poly(vinylphenothiazine) as Battery Cathode Material by Decreasing Polymer Mobility Through Cross-Linking. *Advanced Energy Materials*, **2018**, 8, 1802151	21.8	49
224	Ion and gas chromatography mass spectrometry investigations of organophosphates in lithium ion battery electrolytes by electrochemical aging at elevated cathode potentials. *Journal of Power Sources*, **2016**, 306, 193-199	8.9	47
223	Inhibition of Self-Aggregation in Ionic Liquid Electrolytes for High-Energy Electrochemical Devices. *Journal of Physical Chemistry C*, **2011**, 115, 19431-19436	3.8	47
222	Where is the lithium? Quantitative determination of the lithium distribution in lithium ion battery cells: Investigations on the influence of the temperature, the C-rate and the cell type. *Journal of Power Sources*, **2017**, 346, 63-70	8.9	46
221	A step towards understanding the beneficial influence of a LIPON-based artificial SEI on silicon thin film anodes in lithium-ion batteries. *Nanoscale*, **2018**, 10, 2128-2137	7.7	46
220	On the structural integrity and electrochemical activity of a 0.5Li2MnO3□0.5LiCoO2 cathode material for lithium-ion batteries. *Journal of Materials Chemistry A*, **2014**, 2, 9099	13	44
219	The passivity of lithium electrodes in liquid electrolytes for secondary batteries. *Nature Reviews Materials*,	73.3	44
218	Phosphorus additives for improving high voltage stability and safety of lithium ion batteries. *Journal of Fluorine Chemistry*, **2017**, 198, 24-33	2.1	43
217	Correlation of Structure and Performance of Hard Carbons as Anodes for Sodium Ion Batteries. *Chemistry of Materials*, **2019**, 31, 7288-7299	9.6	43

216	Multi-Scale Correlative Tomography of a Li-Ion Battery Composite Cathode. *Scientific Reports*, **2016**, 6, 30109	4.9	40
215	Effective Optimization of High Voltage Solid-State Lithium Batteries by Using Poly(ethylene oxide)-Based Polymer Electrolyte with Semi-Interpenetrating Network. *Advanced Functional Materials*, **2020**, 30, 2006289	15.6	40
214	Mechanism of Charge/Discharge of Poly(vinylphenothiazine)-Based Li□Organic Batteries. *Chemistry of Materials*, **2018**, 30, 6307-6317	9.6	40
213	Reversible Anion Storage in a Metal-Organic Framework for Dual-Ion Battery Systems. *Journal of the Electrochemical Society*, **2019**, 166, A5474-A5482	3.9	39
212	Development of a method for direct elemental analysis of lithium ion battery degradation products by means of total reflection X-ray fluorescence. *Spectrochimica Acta, Part B: Atomic Spectroscopy*, **2015**, 112, 34-39	3.1	39
211	Quantification of Dead Lithium via In Situ Nuclear Magnetic Resonance Spectroscopy. *Cell Reports Physical Science*, **2020**, 1, 100139	6.1	39
210	A 3D porous Li-rich cathode material with an in situ modified surface for high performance lithium ion batteries with reduced voltage decay. *Journal of Materials Chemistry A*, **2016**, 4, 7230-7237	13	39
209	Large-scale automotive battery cell manufacturing: Analyzing strategic and operational effects on manufacturing costs. *International Journal of Production Economics*, **2021**, 232, 107982	9.3	39
208	Understanding the Outstanding High-Voltage Performance of NCM523||Graphite Lithium Ion Cells after Elimination of Ethylene Carbonate Solvent from Conventional Electrolyte. *Advanced Energy Materials*, **2021**, 11, 2003738	21.8	39
207	P3 Na0.9Ni0.5Mn0.5O2 Cathode Material for Sodium Ion Batteries. *Chemistry of Materials*, **2019**, 31, 5376-5383	9.6	38
206	One-step synthesis of novel mesoporous three-dimensional GeO2 and its lithium storage properties. *Journal of Materials Chemistry A*, **2014**, 2, 17545-17550	13	38
205	New insights into the uptake/release of FTFSI □anions into graphite by means of in situ powder X-ray diffraction. *Electrochemistry Communications*, **2016**, 71, 52-55	5.1	38
204	In situ X-ray diffraction study on the formation of □Sn in nanocrystalline Sn-based electrodes for lithium-ion batteries. *CrystEngComm*, **2015**, 17, 8500-8504	3.3	37
203	Development of Safe and Sustainable Dual-Ion Batteries Through Hybrid Aqueous/Nonaqueous Electrolytes. *Advanced Energy Materials*, **2020**, 10, 1902709	21.8	37
202	Clarification of Decomposition Pathways in a State-of-the-Art Lithium Ion Battery Electrolyte through C-Labeling of Electrolyte Components. *Angewandte Chemie - International Edition*, **2020**, 59, 6128-6137	16.4	37
201	Pentafluorophenyl Isocyanate as an Effective Electrolyte Additive for Improved Performance of Silicon-Based Lithium-Ion Full Cells. *ACS Applied Materials & Interfaces*, **2018**, 10, 28187-28198	9.5	36
200	Solid-State Lithium□Sulfur Battery Enabled by Thio-LiSICON/Polymer Composite Electrolyte and Sulfurized Polyacrylonitrile Cathode. *Advanced Functional Materials*, **2020**, 30, 1910123	15.6	35
199	Qualitative Investigation of the Decomposition of Organic Solvent Based Lithium Ion Battery Electrolytes with LC-IT-TOF-MS. *Analytical Chemistry*, **2016**, 88, 11160-11168	7.8	35

198	Understanding all solid-state lithium batteries through in situ transmission electron microscopy. *Materials Today*, **2021**, 42, 137-161	21.8	34
197	Quantitative investigation of the decomposition of organic lithium ion battery electrolytes with LC-MS/MS. *RSC Advances*, **2017**, 7, 27853-27862	3.7	33
196	Galvanic Corrosion of Lithium-Powder-Based Electrodes. *Advanced Energy Materials*, **2020**, 10, 2000017	21.8	33
195	Investigating the Mg-Si Binary System via Combinatorial Sputter Deposition As High Energy Density Anodes for Lithium-Ion Batteries. *ACS Applied Materials & Interfaces*, **2015**, 7, 20124-33	9.5	33
194	Atomistic insights into deep eutectic electrolytes: the influence of urea on the electrolyte salt LiTFSI in view of electrochemical applications. *Physical Chemistry Chemical Physics*, **2016**, 18, 28403-28408	3.6	33
193	Elimination of "Voltage Noise" of Poly (Ethylene Oxide)-Based Solid Electrolytes in High-Voltage Lithium Batteries: Linear versus Network Polymers. *IScience*, **2020**, 23, 101225	6.1	32
192	Exploring the Effect of Increased Energy Density on the Environmental Impacts of Traction Batteries: A Comparison of Energy Optimized Lithium-Ion and Lithium-Sulfur Batteries for Mobility Applications. *Energies*, **2018**, 11, 150	3.1	32
191	Assessment of Surface Heterogeneity: a Route to Correlate and Quantify the 1st Cycle Irreversible Capacity Caused by SEI Formation to the Various Surfaces of Graphite Anodes for Lithium Ion Cells. *Zeitschrift Fur Physikalische Chemie*, **2015**, 229, 1451-1469	3.1	32
190	Cation-Assisted Lithium-Ion Transport for High-Performance PEO-based Ternary Solid Polymer Electrolytes. *Angewandte Chemie - International Edition*, **2021**, 60, 11919-11927	16.4	32
189	Cascade-Type Prelithiation Approach for Li-Ion Capacitors. *Advanced Energy Materials*, **2019**, 9, 1900078	21.8	31
188	Phenothiazine-Functionalized Poly(norbornene)s as High-Rate Cathode Materials for Organic Batteries. *ChemSusChem*, **2020**, 13, 2232-2238	8.3	31
187	In situ polymerization process: an essential design tool for lithium polymer batteries. *Energy and Environmental Science*, **2021**, 14, 2708-2788	35.4	31
186	Highly Effective Solid Electrolyte Interphase-Forming Electrolyte Additive Enabling High Voltage Lithium-Ion Batteries. *Chemistry of Materials*, **2017**, 29, 7733-7739	9.6	30
185	Dilatometric Study of the Electrochemical Intercalation of Bis(trifluoromethanesulfonyl) imide and Hexafluorophosphate Anions into Carbon-Based Positive Electrodes. *ECS Transactions*, **2015**, 69, 9-21	1	29
184	Cation-Dependent Electrochemistry of Polysulfides in Lithium and Magnesium Electrolyte Solutions. *Journal of Physical Chemistry C*, **2018**, 122, 21770-21783	3.8	28
183	Assessment on the Use of High Capacity Sn4P3@NHC Composite Electrodes for Sodium-Ion Batteries with Ether and Carbonate Electrolytes. *Advanced Functional Materials*, **2020**, 30, 2004798	15.6	27
182	Boehmite-based ceramic separator for lithium-ion batteries. *Journal of Applied Electrochemistry*, **2016**, 46, 69-76	2.6	26
181	Salt Diffusion Coefficients, Concentration Dependence of Cell Potentials, and Transference Numbers of Lithium Difluoromono(oxalato)borate-Based Solutions. *Journal of Chemical & Engineering Data*, **2011**, 56, 4786-4789	2.8	26

180	Alloying of electrodeposited silicon with lithium principal study of applicability as anode material for lithium ion batteries. *Journal of Solid State Electrochemistry*, **2010**, 14, 2203-2207	2.6	26
179	Prospects and limitations of single-crystal cathode materials to overcome cross-talk phenomena in high-voltage lithium ion cells. *Journal of Materials Chemistry A*, **2021**, 9, 7546-7555	13	26
178	Enabling High Performance Potassium-Based Dual-Graphite Battery Cells by Highly Concentrated Electrolytes. *Batteries and Supercaps*, **2019**, 2, 992-1006	5.6	25
177	Parametrisation of the influence of different cycling conditions on the capacity fade and the internal resistance increase for lithium nickel manganese cobalt oxide/graphite cells. *Journal of Electroanalytical Chemistry*, **2013**, 707, 110-116	4.1	25
176	Suppression of Aluminum Current Collector Dissolution by Protective Ceramic Coatings for Better High-Voltage Battery Performance. *ChemPhysChem*, **2017**, 18, 156-163	3.2	25
175	Surface treatment of LiFePO4 cathode material with PPy/PEG conductive layer. *Journal of Solid State Electrochemistry*, **2010**, 14, 2173-2178	2.6	25
174	Recycling of Lithium-Ion Batteries Current State of the Art, Circular Economy, and Next Generation Recycling. *Advanced Energy Materials*,2102917	21.8	25
173	In situLi-NMR analysis of lithium metal surface deposits with varying electrolyte compositions and concentrations. *Physical Chemistry Chemical Physics*, **2019**, 21, 26084-26094	3.6	25
172	The Mechanism of SEI Formation on Single Crystal Si(100), Si(110) and Si(111) Electrodes. *Journal of the Electrochemical Society*, **2015**, 162, A2281-A2288	3.9	24
171	The Power of Stoichiometry: Conditioning and Speciation of MgCl/AlCl in Tetraethylene Glycol Dimethyl Ether-Based Electrolytes. *ACS Applied Materials & Interfaces*, **2019**, 11, 24057-24066	9.5	23
170	Mn or Mn ? Investigating transition metal dissolution of manganese species in lithium ion battery electrolytes by capillary electrophoresis. *Electrophoresis*, **2020**, 41, 697-704	3.6	23
169	Toward High Power Batteries: Pre-lithiated Carbon Nanospheres as High Rate Anode Material for Lithium Ion Batteries. *ACS Applied Energy Materials*, **2018**, 1, 4321-4331	6.1	23
168	Phase stability of Li-ion conductive, ternary solid polymer electrolytes. *Electrochimica Acta*, **2013**, 113, 181-185	6.7	23
167	Fast screening method to characterize lithium ion battery electrolytes by means of solid phase microextraction gas chromatography mass spectrometry. *RSC Advances*, **2017**, 7, 46989-46998	3.7	22
166	High-Voltage All-Solid-State Lithium Battery with Sulfide-Based Electrolyte: Challenges for the Construction of a Bipolar Multicell Stack and How to Overcome Them. *ACS Applied Energy Materials*, **2020**, 3, 3162-3168	6.1	22
165	Is the Cation Innocent? An Analytical Approach on the Cationic Decomposition Behavior of N-Butyl-N-methylpyrrolidinium Bis(trifluoromethanesulfonyl)imide in Contact with Lithium Metal. *Chemistry of Materials*, **2020**, 32, 2389-2398	9.6	22
164	Investigation of the Storage Behavior of Shredded Lithium-Ion Batteries from Electric Vehicles for Recycling Purposes. *ChemSusChem*, **2015**, 8, 3433-8	8.3	22
163	An Ambient Temperature Electrolyte with Superior Lithium Ion Conductivity based on a Self-Assembled Block Copolymer. *Chemistry - A European Journal*, **2018**, 24, 8061-8065	4.8	21

162	Exploiting the Degradation Mechanism of NCM523 Graphite Lithium-Ion Full Cells Operated at High Voltage. *ChemSusChem*, **2021**, 14, 595-613	8.3	21
161	On the Beneficial Impact of Li2CO3 as Electrolyte Additive in NCM523 || Graphite Lithium Ion Cells Under High-Voltage Conditions. *Advanced Energy Materials*, **2021**, 11, 2003756	21.8	21
160	Decomposition of Imidazolium-Based Ionic Liquids in Contact with Lithium Metal. *ChemSusChem*, **2017**, 10, 876-883	8.3	20
159	Ethylene carbonate-free electrolytes for Li-ion battery: Study of the solid electrolyte interphases formed on graphite anodes. *Journal of Power Sources*, **2020**, 451, 227804	8.9	20
158	Insight into the Li Ion Dynamics in Li12Si7: Combining Field Gradient Nuclear Magnetic Resonance, One- and Two-Dimensional Magic-Angle Spinning Nuclear Magnetic Resonance, and Nuclear Magnetic Resonance Relaxometry. *Journal of Physical Chemistry C*, **2014**, 118, 28350-28360	3.8	20
157	Investigation of various layered lithium ion battery cathode materials by plasma- and X-ray-based element analytical techniques. *Analytical and Bioanalytical Chemistry*, **2019**, 411, 277-285	4.4	20
156	Aging stability of Li2FeSiO4 polymorphs in LiPF6 containing organic electrolyte for lithium-ion batteries. *Electrochimica Acta*, **2013**, 105, 542-546	6.7	18
155	Enabling Natural Graphite in High-Voltage Aqueous Graphite || Zn Metal Dual-Ion Batteries. *Advanced Energy Materials*, **2020**, 10, 2001256	21.8	18
154	Performance and behavior of LLZO-based composite polymer electrolyte for lithium metal electrode with high capacity utilization. *Nano Energy*, **2020**, 77, 105196	17.1	18
153	A battery cell for in situ NMR measurements of liquid electrolytes. *Physical Chemistry Chemical Physics*, **2017**, 19, 4962-4966	3.6	17
152	Structure determination of organic aging products in lithium-ion battery electrolytes with gas chromatography chemical ionization mass spectrometry (GC-CI-MS). *RSC Advances*, **2016**, 6, 57253-57260	3.7	17
151	Tailoring Electrolyte Additives with Synergistic Functional Moieties for Silicon Negative Electrode-Based Lithium Ion Batteries: A Case Study on Lactic Acid O-Carboxyanhydride. *Chemistry of Materials*, **2020**, 32, 173-185	9.6	16
150	The Sand equation and its enormous practical relevance for solid-state lithium metal batteries. *Materials Today*, **2021**, 44, 9-14	21.8	16
149	Solvent Co-intercalation into Few-layered TiCT MXenes in Lithium Ion Batteries Induced by Acidic or Basic Post-treatment. *ACS Nano*, **2021**, 15, 3295-3308	16.7	16
148	Synthesis and electrochemical characterization of nano-sized Ag4Sn particles as anode material for lithium-ion batteries. *Electrochimica Acta*, **2016**, 196, 597-602	6.7	15
147	Conventional Electrolyte and Inactive Electrode Materials in Lithium-Ion Batteries: Determining Cumulative Impact of Oxidative Decomposition at High Voltage. *ChemSusChem*, **2020**, 13, 5301-5307	8.3	15
146	Determination and quantification of cations in ionic liquids by capillary electrophoresis-mass spectrometry. *Journal of Chromatography A*, **2017**, 1485, 131-141	4.5	14
145	An Approach for Pre-Lithiation of Li1+xNi0.5Mn1.5O4 Cathodes Mitigating Active Lithium Loss. *Journal of the Electrochemical Society*, **2019**, 166, A3531-A3538	3.9	14

144	Identical Materials but Different Effects of Film-Forming Electrolyte Additives in Li Ion Batteries: Performance of a Benchmark System as the Key. *Chemistry of Materials*, **2020**, 32, 6279-6284	9.6	14
143	An oxo-verdazyl radical for a symmetrical non-aqueous redox flow battery. *Journal of Materials Chemistry A*, **2020**, 8, 22280-22291	13	13
142	Mechanistic Insights into the Pre-Lithiation of Silicon/Graphite Negative Electrodes in Dry State and After Electrolyte Addition Using Passivated Lithium Metal Powder. *Advanced Energy Materials*, **2021**, 11, 2100925	21.8	13
141	Adaptation and improvement of an elemental mapping method for lithium ion battery electrodes and separators by means of laser ablation-inductively coupled plasma-mass spectrometry. *Analytical and Bioanalytical Chemistry*, **2019**, 411, 581-589	4.4	13
140	Study of electrochemical performance and thermal property of LiNi0.5Co0.2Mn0.3O2 cathode materials coated with a novel oligomer additive for high-safety lithium-ion batteries. *Chemical Engineering Journal*, **2021**, 405, 126727	14.7	13
139	Revealing the Impact of Film-Forming Electrolyte Additives on Lithium Metal Batteries via Solid-State NMR/MRI Analysis. *Journal of Physical Chemistry C*, **2021**, 125, 252-265	3.8	13
138	Realizing poly(ethylene oxide) as a polymer for solid electrolytes in high voltage lithium batteries via simple modification of the cell setup. *Materials Advances*,	3.3	13
137	Investigation of nano-sized Cu(II)O as a high capacity conversion material for Li-metal cells and lithium-ion full cells. *Journal of Materials Chemistry A*, **2017**, 5, 6556-6568	13	12
136	Improving the Cycling Performance of High-Voltage NMC111 || Graphite Lithium Ion Cells By an Effective Urea-Based Electrolyte Additive. *Journal of the Electrochemical Society*, **2019**, 166, A2910-A2920	3.9	12
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