

Johannes Kasnatscheew

List of Publications by Citations

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51
papers

2,275
citations

26
h-index

47
g-index

57
ext. papers

3,034
ext. citations

8.3
avg, IF

5.48
L-index

#	Paper	IF	Citations
51	The truth about the 1st cycle Coulombic efficiency of LiNi _{1/3} Co _{1/3} Mn _{1/3} O ₂ (NCM) cathodes. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 3956-65	3.6	233
50	Investigations on novel electrolytes, solvents and SEI additives for use in lithium-ion batteries: Systematic electrochemical characterization and detailed analysis by spectroscopic methods. <i>Progress in Solid State Chemistry</i> , 2014 , 42, 65-84	8	159
49	A reality check and tutorial on electrochemical characterization of battery cell materials: How to choose the appropriate cell setup. <i>Materials Today</i> , 2020 , 32, 131-146	21.8	122
48	Unraveling transition metal dissolution of Li _{1.04} Ni _{1/3} Co _{1/3} Mn _{1/3} O ₂ (NCM 111) in lithium ion full cells by using the total reflection X-ray fluorescence technique. <i>Journal of Power Sources</i> , 2016 , 329, 364-371	8.9	121
47	A Tutorial into Practical Capacity and Mass Balancing of Lithium Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2017 , 164, A2479-A2486	3.9	101
46	Graphite Recycling from Spent Lithium-Ion Batteries. <i>ChemSusChem</i> , 2016 , 9, 3473-3484	8.3	98
45	Changing Established Belief on Capacity Fade Mechanisms: Thorough Investigation of LiNi _{1/3} Co _{1/3} Mn _{1/3} O ₂ (NCM111) under High Voltage Conditions. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 1521-1529	3.8	89
44	Determining oxidative stability of battery electrolytes: validity of common electrochemical stability window (ESW) data and alternative strategies. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 16078-16086	3.6	84
43	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. <i>Scientific Reports</i> , 2020 , 10, 4390	4.9	84
42	Learning from Overpotentials in Lithium Ion Batteries: A Case Study on the LiNi _{1/3} Co _{1/3} Mn _{1/3} O ₂ (NCM) Cathode. <i>Journal of the Electrochemical Society</i> , 2016 , 163, A2943-A2950	3.9	76
41	Learning from Electrochemical Data: Simple Evaluation and Classification of LiMO ₂ -type-based Positive Electrodes for Li-Ion Batteries. <i>Energy Technology</i> , 2017 , 5, 1670-1679	3.5	70
40	Fast Charging of Lithium-Ion Batteries: A Review of Materials Aspects. <i>Advanced Energy Materials</i> , 2021 , 11, 2101126	21.8	65
39	Fluoroethylene Carbonate as an Additive for γ -Butyrolactone Based Electrolytes. <i>Journal of the Electrochemical Society</i> , 2013 , 160, A1369-A1374	3.9	63
38	Vinyl sulfones as SEI-forming additives in propylene carbonate based electrolytes for lithium-ion batteries. <i>Electrochemistry Communications</i> , 2014 , 40, 80-83	5.1	62
37	Sodium-Based vs. Lithium-Based Dual-Ion Cells: Electrochemical Study of Anion Intercalation/De-Intercalation into/from Graphite and Metal Plating/Dissolution Behavior. <i>Electrochimica Acta</i> , 2017 , 228, 18-27	6.7	61
36	Interfaces and Materials in Lithium Ion Batteries: Challenges for Theoretical Electrochemistry. <i>Topics in Current Chemistry</i> , 2018 , 376, 16	7.2	58
35	Impact of Selected LiPF ₆ Hydrolysis Products on the High Voltage Stability of Lithium-Ion Battery Cells. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 30871-30878	9.5	58

34	Improving cycle life of layered lithium transition metal oxide (Li M O 2) based positive electrodes for Li ion batteries by smart selection of the electrochemical charge conditions. <i>Journal of Power Sources</i> , 2017 , 359, 458-467	8.9	53
33	Counterintuitive Role of Magnesium Salts as Effective Electrolyte Additives for High Voltage Lithium-Ion Batteries. <i>Advanced Materials Interfaces</i> , 2016 , 3, 1600096	4.6	53
32	Lithium ion battery cells under abusive discharge conditions: Electrode potential development and interactions between positive and negative electrode. <i>Journal of Power Sources</i> , 2017 , 362, 278-282	8.9	40
31	Effective Optimization of High Voltage Solid-State Lithium Batteries by Using Poly(ethylene oxide)-Based Polymer Electrolyte with Semi-Interpenetrating Network. <i>Advanced Functional Materials</i> , 2020 , 30, 2006289	15.6	40
30	Do Increased Ni Contents in LiNixMnyCozO2 (NMC) Electrodes Decrease Structural and Thermal Stability of Li Ion Batteries? A Thorough Look by Consideration of the Li+ Extraction Ratio. <i>ACS Applied Energy Materials</i> , 2019 , 2, 7733-7737	6.1	39
29	Understanding the Outstanding High-Voltage Performance of NCM523 Graphite Lithium Ion Cells after Elimination of Ethylene Carbonate Solvent from Conventional Electrolyte. <i>Advanced Energy Materials</i> , 2021 , 11, 2003738	21.8	39
28	Elimination of "Voltage Noise" of Poly (Ethylene Oxide)-Based Solid Electrolytes in High-Voltage Lithium Batteries: Linear versus Network Polymers. <i>IScience</i> , 2020 , 23, 101225	6.1	32
27	Influence of LiPF6 on the Aluminum Current Collector Dissolution in High Voltage Lithium Ion Batteries after Long-Term Charge/Discharge Experiments. <i>Journal of the Electrochemical Society</i> , 2017 , 164, A1474-A1479	3.9	30
26	Highly Effective Solid Electrolyte Interphase-Forming Electrolyte Additive Enabling High Voltage Lithium-Ion Batteries. <i>Chemistry of Materials</i> , 2017 , 29, 7733-7739	9.6	30
25	Prospects and limitations of single-crystal cathode materials to overcome cross-talk phenomena in high-voltage lithium ion cells. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 7546-7555	13	26
24	Performance tuning of lithium ion battery cells with area-oversized graphite based negative electrodes. <i>Journal of Power Sources</i> , 2018 , 396, 519-526	8.9	24
23	Fluorinated Electrolyte Compound as a Bi-Functional Interphase Additive for Both, Anodes and Cathodes in Lithium-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2018 , 165, A3525-A3530	3.9	23
22	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. <i>ACS Applied Energy Materials</i> , 2020 , 3, 3162-3168	6.1	22
21	Exploiting the Degradation Mechanism of NCM523 Graphite Lithium-Ion Full Cells Operated at High Voltage. <i>ChemSusChem</i> , 2021 , 14, 595-613	8.3	21
20	On the Beneficial Impact of Li2CO3 as Electrolyte Additive in NCM523 Graphite Lithium Ion Cells Under High-Voltage Conditions. <i>Advanced Energy Materials</i> , 2021 , 11, 2003756	21.8	21
19	Investigation of various layered lithium ion battery cathode materials by plasma- and X-ray-based element analytical techniques. <i>Analytical and Bioanalytical Chemistry</i> , 2019 , 411, 277-285	4.4	20
18	Study of the Formation of a Solid Electrolyte Interphase (SEI) on a Silicon Nanowire Anode in Liquid Disiloxane Electrolyte with Nitrile End Groups for Lithium-Ion Batteries. <i>Batteries and Supercaps</i> , 2019 , 2, 213-222	5.6	19
17	The Sand equation and its enormous practical relevance for solid-state lithium metal batteries. <i>Materials Today</i> , 2021 , 44, 9-14	21.8	16

16	Conventional Electrolyte and Inactive Electrode Materials in Lithium-Ion Batteries: Determining Cumulative Impact of Oxidative Decomposition at High Voltage. <i>ChemSusChem</i> , 2020 , 13, 5301-5307	8.3	15
15	Magnesium-based additives for the cathode slurry to enable high voltage application of lithium-ion batteries. <i>Electrochimica Acta</i> , 2017 , 228, 9-17	6.7	14
14	Identical Materials but Different Effects of Film-Forming Electrolyte Additives in Li Ion Batteries: Performance of a Benchmark System as the Key. <i>Chemistry of Materials</i> , 2020 , 32, 6279-6284	9.6	14
13	Realizing poly(ethylene oxide) as a polymer for solid electrolytes in high voltage lithium batteries via simple modification of the cell setup. <i>Materials Advances</i> ,	3.3	13
12	Evaluation of Allylboronic Acid Pinacol Ester as Effective Shutdown Overcharge Additive for Lithium Ion Cells. <i>Journal of the Electrochemical Society</i> , 2017 , 164, A168-A172	3.9	12
11	Disiloxane with nitrile end groups as Co-solvent for electrolytes in lithiumsulfur batteries [A feasible approach to replace LiNO ₃ . <i>Electrochimica Acta</i> , 2019 , 307, 76-82	6.7	9
10	Kinetical threshold limits in solid-state lithium batteries: Data on practical relevance of sand equation. <i>Data in Brief</i> , 2021 , 34, 106688	1.2	9
9	Pragmatic Approaches to Correlate between the Physicochemical Properties of a Linear Poly(ethylene oxide)-Based Solid Polymer Electrolyte and the Performance in a High-Voltage Li-Metal Battery. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 18089-18097	3.8	7
8	Re-evaluating common electrolyte additives for high-voltage lithium ion batteries. <i>Cell Reports Physical Science</i> , 2021 , 2, 100521	6.1	7
7	Area Oversizing of Lithium Metal Electrodes in Solid-State Batteries: Relevance for Overvoltage and thus Performance?. <i>ChemSusChem</i> , 2021 , 14, 2163-2169	8.3	5
6	Enabling Mg-Based Ionic Liquid Electrolytes for Hybrid Dual-Ion Capacitors. <i>Batteries and Supercaps</i> , 2021 , 4, 504-512	5.6	5
5	Understanding the Role of Commercial Separators and Their Reactivity toward LiPF ₆ on the Failure Mechanism of High-Voltage NCM523 Graphite Lithium Ion Cells. <i>Advanced Energy Materials</i> , 2102599	21.8	3
4	Demonstrating Apparently Inconspicuous but Sensitive Impacts on the Rollover Failure of Lithium-Ion Batteries at a High Voltage. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 57241-57251	9.5	1
3	Area Oversizing of Lithium Metal Electrodes in Solid-State Batteries: Relevance for Overvoltage and thus Performance?. <i>ChemSusChem</i> , 2021 , 14, 2144	8.3	1
2	Evaluating the Passivation Layer of Freshly Cleaved Silicon Surfaces by Binary Silane-Based Electrolytes. <i>Batteries and Supercaps</i> , 2021 , 4, 1611	5.6	1
1	Graphite Lithium-Ion Cells: On the Beneficial Impact of Li ₂ CO ₃ as Electrolyte Additive in NCM523 Graphite Lithium Ion Cells Under High-Voltage Conditions (Adv. Energy Mater. 10/2021). <i>Advanced Energy Materials</i> , 2021 , 11, 2170039	21.8	