

# Margret Wohlfahrt-Mehrens

## List of Publications by Year in descending order

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48  
papers

4,654  
citations

201674

27  
h-index

214800

47  
g-index

49  
all docs

49  
docs citations

49  
times ranked

3609  
citing authors

#	ARTICLE	IF	CITATIONS
1	Temperature dependent ageing mechanisms in Lithium-ion batteries – A Post-Mortem study. Journal of Power Sources, 2014, 262, 129-135.	7.8	772
2	Li plating as unwanted side reaction in commercial Li-ion cells – A review. Journal of Power Sources, 2018, 384, 107-124.	7.8	521
3	Fast Charging of Lithium-Ion Batteries: A Review of Materials Aspects. Advanced Energy Materials, 2021, 11, 2101126.	19.5	407
4	Lithium-ion batteries – Current state of the art and anticipated developments. Journal of Power Sources, 2020, 479, 228708.	7.8	401
5	Flammability of Li-Ion Battery Electrolytes: Flash Point and Self-Extinguishing Time Measurements. Journal of the Electrochemical Society, 2015, 162, A3084-A3097.	2.9	262
6	Interaction of cyclic ageing at high-rate and low temperatures and safety in lithium-ion batteries. Journal of Power Sources, 2015, 274, 432-439.	7.8	241
7	Review – Post-Mortem Analysis of Aged Lithium-Ion Batteries: Disassembly Methodology and Physico-Chemical Analysis Techniques. Journal of the Electrochemical Society, 2016, 163, A2149-A2164.	2.9	203
8	Optimization of Charging Strategy by Prevention of Lithium Deposition on Anodes in high-energy Lithium-ion Batteries – Electrochemical Experiments. Electrochimica Acta, 2015, 178, 525-532.	5.2	158
9	Interplay of Operational Parameters on Lithium Deposition in Lithium-Ion Cells: Systematic Measurements with Reconstructed 3-Electrode Pouch Full Cells. Journal of the Electrochemical Society, 2016, 163, A1232-A1238.	2.9	136
10	Energy Density of Cylindrical Li-Ion Cells: A Comparison of Commercial 18650 to the 21700 Cells. Journal of the Electrochemical Society, 2018, 165, A3284-A3291.	2.9	125
11	Bringing forward the development of battery cells for automotive applications: Perspective of R&D activities in China, Japan, the EU and the USA. Journal of Power Sources, 2020, 459, 228073.	7.8	109
12	Influence of Conductive Additives and Binder on the Impedance of Lithium-Ion Battery Electrodes: Effect of Morphology. Journal of the Electrochemical Society, 2020, 167, 013546.	2.9	105
13	Influence of Cell Design on Temperatures and Temperature Gradients in Lithium-Ion Cells: An In Operando Study. Journal of the Electrochemical Society, 2015, 162, A921-A927.	2.9	97
14	Study of the influence of mechanical pressure on the performance and aging of Lithium-ion battery cells. Journal of Power Sources, 2019, 440, 227148.	7.8	95
15	Effects of rest time after Li plating on safety behavior – ARC tests with commercial high-energy 18650 Li-ion cells. Electrochimica Acta, 2017, 230, 454-460.	5.2	93
16	Manufacturing Process for Improved Ultra-Thick Cathodes in High-Energy Lithium-Ion Batteries. Energy Technology, 2020, 8, 1900167.	3.8	89
17	Electrochemical, Post-Mortem, and ARC Analysis of Li-Ion Cell Safety in Second-Life Applications. Journal of the Electrochemical Society, 2017, 164, A3154-A3162.	2.9	83
18	Effects of Mechanical Compression on the Aging and the Expansion Behavior of Si/C-Composite NMC811 in Different Lithium-Ion Battery Cell Formats. Journal of the Electrochemical Society, 2019, 166, A3796-A3805.	2.9	68

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19	Effects of Biphenyl Polymerization on Lithium Deposition in Commercial Graphite/NMC Lithium-Ion Pouch-Cells during Calendar Aging at High Temperature. <i>Journal of the Electrochemical Society</i> , 2017, 164, A1089-A1097.	2.9	63
20	Inhomogeneous Degradation of Graphite Anodes in Li-Ion Cells: A Postmortem Study Using Glow Discharge Optical Emission Spectroscopy (GD-OES). <i>Journal of Physical Chemistry C</i> , 2016, 120, 22225-22234.	3.1	62
21	Analysis of the effect of applying external mechanical pressure on next generation silicon alloy lithium-ion cells. <i>Electrochimica Acta</i> , 2019, 306, 387-395.	5.2	52
22	High performance 1.2ÂAh Si-alloy/Graphite   LiNi 0.5 Mn 0.3 Co 0.2 O 2 prototype Li-ion battery. <i>Journal of Power Sources</i> , 2017, 357, 188-197.	7.8	44
23	Post-Mortem Analysis of Calendar-Aged 16 Ah NMC/Graphite Pouch Cells for EV Application. <i>Journal of Physical Chemistry C</i> , 2017, 121, 21865-21876.	3.1	43
24	Comprehensive Aging Analysis of Volumetric Constrained Lithium-Ion Pouch Cells with High Concentration Silicon-Alloy Anodes. <i>Energies</i> , 2018, 11, 2948.	3.1	39
25	Correlations between Electrochemical Data and Results from Post-Mortem Analysis of Aged Lithium-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2015, 162, A1500-A1505.	2.9	37
26	Low-temperature Charging and Aging Mechanisms of Si/C Composite Anodes in Li-ion Batteries: An Operando Neutron Scattering Study. <i>ChemSusChem</i> , 2020, 13, 529-538.	6.8	31
27	Mechanical behavior of Silicon-Graphite pouch cells under external compressive load: Implications and opportunities for battery pack design. <i>Journal of Power Sources</i> , 2020, 451, 227774.	7.8	31
28	Influence of the Electrolyte Salt Concentration on the Rate Capability of Ultra-thick NCM 622 Electrodes. <i>Batteries and Supercaps</i> , 2020, 3, 1172-1182.	4.7	25
29	Influence of current collecting tab design on thermal and electrochemical performance of cylindrical Lithium-ion cells during high current discharge. <i>Journal of Energy Storage</i> , 2016, 5, 163-168.	8.1	23
30	Surface Film Formation and Dissolution in Si/C Anodes of Li-Ion Batteries: A Glow Discharge Optical Emission Spectroscopy Depth Profiling Study. <i>Journal of Physical Chemistry C</i> , 2019, 123, 18795-18803.	3.1	21
31	Insights Into Thermal Runaway of Li-ion Cells by Accelerating Rate Calorimetry Coupled with External Sensors and Online Gas Analysis. <i>Batteries and Supercaps</i> , 2021, 4, 1135-1144.	4.7	20
32	Origin of the Synergetic Effects of LiFe <sub>0.3</sub> Mn <sub>0.7</sub> PO <sub>4</sub> Spinel Blends via Dynamic In Situ X-ray Diffraction Measurements. <i>Journal of the Electrochemical Society</i> , 2016, 163, A1936-A1940.	2.9	18
33	Quantitative Analysis of Consumption of Fluoroethylene Carbonate Additives on Silicon Alloy Anodes. <i>Journal of the Electrochemical Society</i> , 2018, 165, A2467-A2469.	2.9	18
34	Identification of Degradation Mechanisms by Post-Mortem Analysis for High Power and High Energy Commercial Li-Ion Cells after Electric Vehicle Aging. <i>Batteries</i> , 2021, 7, 48.	4.5	18
35	Study of the Binder Influence on Expansion/Contraction Behavior of Silicon Alloy Negative Electrodes for Lithium-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2020, 167, 160537.	2.9	17
36	Evaluation of Scalable Porous Si-Rich Si/C Composites with Low Volume Expansion in Coin Cells to Prismatic Cell Formats. <i>Energy Technology</i> , 2020, 8, 2000217.	3.8	16

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37	4-Electrode Full Cells for Operando Li <sup>+</sup> Activity Measurements and Prevention of Li Deposition in Li-Ion Cells. <i>Journal of the Electrochemical Society</i> , 2020, 167, 090525.	2.9	15
38	Template-Derived Submicrometric Carbon Spheres for Lithium-Sulfur and Sodium-Ion Battery Electrodes. <i>Energy Technology</i> , 2018, 6, 1797-1804.	3.8	13
39	Enabling Fast-Charging Lithium-Ion Battery Anodes: Influence of Spheroidization on Natural Graphite. <i>Batteries and Supercaps</i> , 2022, 5, .	4.7	13
40	Biphenyl-Bridged Organosilica as a Precursor for Mesoporous Silicon Oxycarbide and Its Application in Lithium and Sodium Ion Batteries. <i>Nanomaterials</i> , 2019, 9, 754.	4.1	12
41	Mechanistic Details of the Spontaneous Intercalation of Li Metal into Graphite Electrodes. <i>Journal of the Electrochemical Society</i> , 2020, 167, 140546.	2.9	12
42	Cross-Sectional In Situ Optical Microscopy with Simultaneous Electrochemical Measurements for Lithium-Ion Full Cells. <i>Journal of the Electrochemical Society</i> , 2022, 169, 050519.	2.9	12
43	Experimental Confirmation of C-Rate Dependent Minima Shifts in Arrhenius Plots of Li-Ion Battery Aging. <i>Journal of the Electrochemical Society</i> , 2022, 169, 030509.	2.9	11
44	Detection of Li Deposition on Si/Graphite Anodes from Commercial Li-Ion Cells: A Post-Mortem GD-OES Depth Profiling Study. <i>Journal of the Electrochemical Society</i> , 2022, 169, 050533.	2.9	9
45	Communication-Detection of Si Distribution in Si/C Composite Anodes by Glow Discharge Optical Emission Spectroscopy. <i>Journal of the Electrochemical Society</i> , 2018, 165, A3602-A3604.	2.9	6
46	Communication-Edge Quality Contribution on the Electrical Impedance of Lithium-Ion Batteries Electrodes. <i>Journal of the Electrochemical Society</i> , 2020, 167, 080504.	2.9	5
47	3D-Printed Testing Plate for the Optimization of High C-Rates Cycling Performance of Lithium-Ion Cells. <i>Journal of the Electrochemical Society</i> , 2021, 168, 050508.	2.9	3
48	Aqueous Processing of LiNi <sub>0.83</sub> Co <sub>0.12</sub> Mn <sub>0.05</sub> O <sub>2</sub> Positive Electrodes Using Established Water-Based Binders. <i>ECS Meeting Abstracts</i> , 2021, MA2021-02, 1908-1908.	0.0	0