

# Thomas Waldmann

## List of Publications by Year in descending order

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Version: 2024-02-01

41  
papers

3,556  
citations

331670

21  
h-index

289244

40  
g-index

42  
all docs

42  
docs citations

42  
times ranked

2774  
citing authors

#	ARTICLE	IF	CITATIONS
1	Temperature dependent ageing mechanisms in Lithium-ion batteries – A Post-Mortem study. <i>Journal of Power Sources</i> , 2014, 262, 129-135.	7.8	772
2	Li plating as unwanted side reaction in commercial Li-ion cells – A review. <i>Journal of Power Sources</i> , 2018, 384, 107-124.	7.8	521
3	Fast Charging of Lithium-Ion Batteries: A Review of Materials Aspects. <i>Advanced Energy Materials</i> , 2021, 11, 2101126.	19.5	407
4	Interaction of cyclic ageing at high-rate and low temperatures and safety in lithium-ion batteries. <i>Journal of Power Sources</i> , 2015, 274, 432-439.	7.8	241
5	Review – Post-Mortem Analysis of Aged Lithium-Ion Batteries: Disassembly Methodology and Physico-Chemical Analysis Techniques. <i>Journal of the Electrochemical Society</i> , 2016, 163, A2149-A2164.	2.9	203
6	Optimization of Charging Strategy by Prevention of Lithium Deposition on Anodes in high-energy Lithium-ion Batteries – Electrochemical Experiments. <i>Electrochimica Acta</i> , 2015, 178, 525-532.	5.2	158
7	Interplay of Operational Parameters on Lithium Deposition in Lithium-Ion Cells: Systematic Measurements with Reconstructed 3-Electrode Pouch Full Cells. <i>Journal of the Electrochemical Society</i> , 2016, 163, A1232-A1238.	2.9	136
8	Energy Density of Cylindrical Li-Ion Cells: A Comparison of Commercial 18650 to the 21700 Cells. <i>Journal of the Electrochemical Society</i> , 2018, 165, A3284-A3291.	2.9	125
9	Influence of Cell Design on Temperatures and Temperature Gradients in Lithium-Ion Cells: An In Operando Study. <i>Journal of the Electrochemical Society</i> , 2015, 162, A921-A927.	2.9	97
10	Effects of rest time after Li plating on safety behavior – ARC tests with commercial high-energy 18650 Li-ion cells. <i>Electrochimica Acta</i> , 2017, 230, 454-460.	5.2	93
11	Electrochemical, Post-Mortem, and ARC Analysis of Li-Ion Cell Safety in Second-Life Applications. <i>Journal of the Electrochemical Society</i> , 2017, 164, A3154-A3162.	2.9	83
12	Imaging an Ionic Liquid Adlayer by Scanning Tunneling Microscopy at the Solid   Vacuum Interface. <i>ChemPhysChem</i> , 2011, 12, 2565-2567.	2.1	69
13	Effects of Mechanical Compression on the Aging and the Expansion Behavior of Si/C-Composite   NMC811 in Different Lithium-Ion Battery Cell Formats. <i>Journal of the Electrochemical Society</i> , 2019, 166, A3796-A3805.	2.9	68
14	18650 vs. 21700 Li-ion cells – A direct comparison of electrochemical, thermal, and geometrical properties. <i>Journal of Power Sources</i> , 2020, 472, 228614.	7.8	66
15	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
16	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
17	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
18	Structure Formation in Bis(terpyridine) Derivative Adlayers: Molecule – Substrate versus Molecule – Molecule Interactions. <i>Langmuir</i> , 2007, 23, 11570-11579.	3.5	38

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19	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
20	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
21	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
22	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
23	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
24	The role of surface defects in large organic molecule adsorption: substrate configuration effects. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 10726.	2.8	19
25	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
26	A Direct Comparison of Pilot-Scale Li-Ion Cells in the Formats PHEV1, Pouch, and 21700. <i>Journal of the Electrochemical Society</i> , 2021, 168, 090519.	2.9	16
27	4-Electrode Full Cells for Operando $\text{Li}^+$ Activity Measurements and Prevention of Li Deposition in Li-Ion Cells. <i>Journal of the Electrochemical Society</i> , 2020, 167, 090525.	2.9	15
28	Oxidation of an Organic Adlayer: A Bird's Eye View. <i>Journal of the American Chemical Society</i> , 2012, 134, 8817-8822.	13.7	12
29	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
30	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
31	Stabilization of Large Adsorbates by Rotational Entropy: A Time-Resolved Variable-Temperature STM Study. <i>ChemPhysChem</i> , 2013, 14, 162-169.	2.1	11
32	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
33	Cu Dissolution during Over-Discharge of Li-Ion Cells to 0 V: A Post-Mortem Study. <i>Journal of the Electrochemical Society</i> , 2021, 168, 020506.	2.9	9
34	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
35	Substrate Registry in Disordered Layers of Large Molecules. <i>ChemPhysChem</i> , 2010, 11, 1513-1517.	2.1	8
36	Growth of an oligopyridine adlayer on Ag(100) – A scanning tunnelling microscopy study. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 20724.	2.8	6

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37	Communicationâ€”Detection of Si Distribution in Si/C Composite Anodes by Glow Discharge Optical Emission Spectroscopy. Journal of the Electrochemical Society, 2018, 165, A3602-A3604.	2.9	6
38	Detection of Copper Deposition on Anodes of Overâ€”Discharged Lithium Ion Cells by GDâ€”OES Depth Profiling. ChemPhysChem, 2020, 21, 2047-2050.	2.1	6
39	Increase of Cycling Stability in Pilot-Scale 21700 Format Li-Ion Cells by Foil Tab Design. Processes, 2021, 9, 1908.	2.8	6
40	3D-Printed Testing Plate for the Optimization of High C-Rates Cycling Performance of Lithium-Ion Cells. Journal of the Electrochemical Society, 2021, 168, 050508.	2.9	3
41	Investigation of Li Metal Plating and Dissolution on Graphite Electrodes. ECS Meeting Abstracts, 2021, MA2021-01, 294-294.	0.0	0