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In 2011, he joined the ECM group at Zentrum für Sonnenenergie- und Wasserstoff-Forschung Baden-Württemberg (ZSW).
He became team leader of the Post-Mortem and aging mechanisms group at ZSW in 2017.

Dr. Waldmann is interested in

- Effects of cell design on aging and temperature distributions in cells
- Degradation mechanisms of Lithium-ion cells and Post-Mortem analysis
- Method development
- Inhomogeneous aging effects
- Interaction of aging mechanisms and safety
- Knowledge-based extension of cycle life and charging strategies

Selected Publications relevant for the submitted abstract:
(Selection from 40 peer-reviewed scientific papers)

'A direct comparison of pilot-scale Li-ion cells in the formats PHEV1, pouch, and 21700', T. Waldmann, S. Rössler, M. Blessing, R. Schäfer, R.-G. Scurtu, W. Braunwarth, M. Wohlfahrt-Mehrens, J. Electrochem. Soc. 168, 2021, 090519, http://dx.doi.org/10.1149/1945-7111/ac208c

'18650 vs. 21700 Li-ion cells – A direct comparison of electrochemical, thermal, and geometrical properties', T. Waldmann, R.-G. Scurtu, K. Richter, M. Wohlfahrt-Mehrens, J. Power Sources 472, 228614, 2020, https://doi.org/10.1016/j.jpowsour.2020.228614

'Energy Density of Cylindrical Li-Ion Cells: A Comparison of Commercial 18650 to the 21700 Cells', J.B. Quinn, T. Waldmann, K. Richter, M. Kasper, M. Wohlfahrt-Mehrens, J. Electrochem. Soc. 165, A3284-A3291, 2018, https://dx.doi.org/10.1149/2.0281814jes

'Influence of current collecting tab design on thermal and electrochemical performance of cylindrical Lithium-ion cells during high current discharge', T. Waldmann, G. Geramifard, M. Wohlfahrt-Mehrens, Journal of Energy Storage 5, 163–168, 2016, http://dx.doi.org/10.1016/j.est.2015.12.007

'A mechanical Aging Mechanism in Lithium-Ion Batteries', T. Waldmann, S. Gorse, T. Samtleben, G. Schneider, V. Knoblauch, M. Wohlfahrt-Mehrens, Journal of The Electrochemical Society, 161, A1742-A1747, 2014, http://dx.doi.org/10.1149/2.1001410jes